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U.S. Congress. Senate.

Cooperative Reclamation Act

Washington

1921

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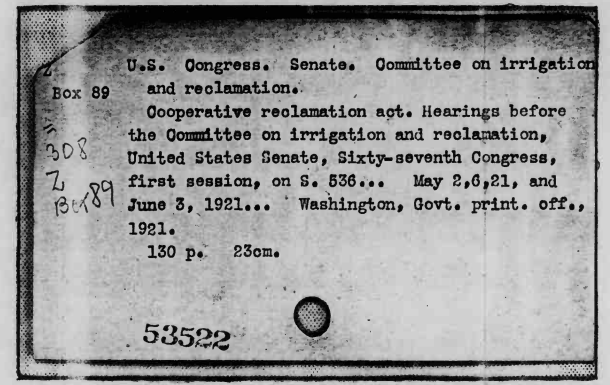

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COOPERATIVE RECLAMATION ACT

HEARINGS

BEFORE THE

COMMITTEE ON IRRIGATION AND RECLAMATION, UNITED STATES SENATE

SIXTY-SEVENTH CONGRESS

FIRST SESSION

ON

S. 536

A BILL TO ENCOURAGE THE DEVELOPMENT OF THE AGRICULTURAL RESOURCES OF THE UNITED STATES THROUGH FEDERAL AND STATE COOPERATION, GIVING PREFERENCE IN THE MATTER OF EMPLOYMENT AND THE ESTABLISHMENT OF RURAL HOMES TO THOSE WHO HAVE SERVED WITH THE MILITARY AND NAVAL FORCES OF THE UNITED STATES

MAY 2, 6, 21, AND JUNE 3, 1921

Printed for the use of the Committee on Irrigation and Reclamation

WASHINGTON
GOVERNMENT PRINTING OFFICE
1921

COMMITTEE ON IRRIGATION AND RECLAMATION.

CHARLES L. McNARY, Oregon, *Chairman.*

WESLEY L. JONES, Washington.	MORRIS SHEPPARD, Texas.
LAWRENCE C. PHIPPS, Colorado.	THOMAS J. WALSH, Montana.
FRANK R. GOODING, Idaho.	JOHN B. KENDRICK, Wyoming.
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TASKER L. ODDIE, Nevada.	
SAMUEL M. SHORTRIDGE, California.	

C. W. MORTON, *Clerk.*

COOPERATIVE RECLAMATION ACT.

MONDAY, MAY 2, 1921.

UNITED STATES SENATE,
COMMITTEE ON IRRIGATION AND RECLAMATION,
Washington, D. C.

The committee met, pursuant to call, at 10.30 o'clock a. m., in room 442, Senate Office Building, Hon. Charles L. McNary presiding.

Present: Senators McNary (chairman), Jones, Phipps, Gooding, Cameron, Oddie, Shortridge, Sheppard, Walsh, Kendrick, and Pittman.

The CHAIRMAN. I have called this meeting to consider Senate bill 536. You have a copy of it before you. This proposed measure is the product of a number of minds. We have taken into consideration all the previous legislation and suggested legislation, and have endeavored to develop a comprehensive plan for the development of the great West. Mr. Blaine, who is one of the members of the Western States Reclamation Association and has had much to do with the structure of this bill, is here to represent that association, and I shall call him as the first witness so that he may go into a discussion of the measure. I should like to suggest that Mr. Blaine be permitted to make his statement, and then such questions as are desired may be propounded later; that makes an easy record to read.

To make the record complete, I will ask the reporter to insert at this place a copy of the bill.

(The bill referred to is as follows:)

[S. 536, Sixty-seventh Congress, first session.]

A BILL To encourage the development of the agricultural resources of the United States through Federal and State cooperation, giving preference in the matter of employment and the establishment of rural homes to those who have served with the military and naval forces of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That when any State, Territory, or any minor subdivision or subdivisions thereof acting conjointly and having the authority desire the cooperation of the United States for the irrigation of any arid or semiarid lands suitable for settlement and cultivation they may do so by a petition to the Secretary of the Interior. The petition shall be accompanied by maps showing the lands of the district or proposed district, together with the plans, estimates, and description of the project to be constructed. The short title of this act shall be "Cooperative reclamation act."

SEC. 2. The Secretary of the Interior hereinafter referred to as "Secretary" may, upon receiving a petition, examine the project, and may enter into a contract with a district as herein provided when he shall be satisfied—

(a) That the construction of the project is feasible.

(b) That the lands of the project are of such quality as to justify their reclamation.

(c) That when the lands are reclaimed they will be suitable for settlement.

(d) That a district has been organized in conformity with the laws of the State or States in which the project in whole or in part is situated, and that the district has authorized a contract to be entered into with the United States for the purpose herein provided, and the issuance of the bonds or other evidence of indebtedness against the

lands of the district or districts in such amount as to provide ample funds for the construction of the necessary works for the reclamation of the lands, including interest charges, cost of appraisal, and sale of bonds together with expenses incidental thereto.

(e) That the laws of the State empower the district to enter into a contract with the United States for the purpose herein provided; and for the issuing by the district or districts of bonds or other satisfactory evidence of indebtedness, and that the laws of the State provide for the assessing, levying, and collecting of a tax and assessment by the district against all of the lands therein benefited including land belonging to the State, or to its minor subdivision, for the purpose of paying the bonds, principal, and interest, and other evidence of indebtedness, and for the cost of operating and maintaining the project, and that the tax or assessment becomes a lien on the property benefited and that a sale for the payment of such tax or assessment due for any one year does not affect the power to levy any tax or assessment for a subsequent year, and that the laws require the State or the minor subdivision to pay the tax, or assessment, or to enforce its collection by forfeiture or sale of the property, or otherwise.

(f) That the validity of the organization of the district and of the bonds through a confirmation by the court has been determined or the time limit in which the validity of such district and bonds can be assailed has expired.

(g) That the owners of excess lands shall have agreed with the Secretary upon the price, terms, and conditions upon which he may sell their excess holdings to settlers.

SEC. 3. When the Secretary shall be satisfied that all of the provisions of this act and the rules and regulations herein authorized have been complied with, he may approve the project and enter into a contract with the district for its construction.

SEC. 4. When the district shall have authorized the issuance of bonds to be approved by the Secreatry in ample amount to cover the estimated cost of the project, which estimate may, in his discretion, include an amount sufficient to pay the interest accruing upon the bonds during the period of construction, and 2 per centum of the estimated cost of the improvement, as a fund with which to pay commissions, advertising charges, and other expenses incident to the sale of the bonds (the balance of the 2 per centum, if any, to be placed to the credit of the reclamation fund), and when the validity of such bond issue shall have been confirmed or shall be acceptable to the Secretary, and the project and contract or contracts shall have been executed by the parties, the district or districts, shall, pursuant to such contract or contracts, deposit the bonds with the Federal Farm Loan Board (hereafter referred to as "board") and the board shall receive the bonds for the purposes herein provided.

When the bonds shall have been deposited, and funds made available as herein provided, the Secretary shall be authorized to proceed with the construction of the project. Upon completion of a project all bonds issued in excess of the cost thereof shall, upon request of the Secretary, be canceled; and the deficiency, if any, shall be covered by additional district bonds, to be disposed of in the same manner as the original bond issue, or, at the option of the Secretary, be added to the tax or assessment roll and collected as other charges, and when paid shall be covered into the reclamation fund.

SEC. 5. The bonds shall run for a period not exceeding twenty-five years, bear interest at a rate to be fixed by the Secretary, not exceeding 5 per centum payable annually, and be issued in denominations of $25, $50, $100, $500, and $1,000.

SEC. 6. When, upon request of the Secretary, an investigation shall be made and in response thereto the board shall find the value of all of the property of the district subject to assessment for the payment of the bonds to be not less than twice the par value of the then outstanding bonds, the board shall offer the bonds at public or private sale under terms and conditions to be provided by rules and regulations which the board is hereby authorized to make, and shall deposit the net proceeds to the credit of the reclamation fund. Prior to the sale of bonds the board shall collect all maturing principal and interest and deposit the same to the credit of the reclamation fund, and thereafter the board shall collect the principal and interest of the bonds and make proper application thereof. During the course of construction of a project, whether the interest is paid or capitalized, it shall be calculated only upon advances.

SEC. 7. The authority contained in the Federal farm loan act of July 17, 1916, and acts amendatory thereof and supplementary thereto, is hereby extended to provide for the discharge of the duties of the Federal Farm Loan Board as specified herein.

SEC. 8. All balances of moneys received under provisions of this act not otherwise disposed of shall be covered into the reclamation fund.

SEC. 9. That when the indebtedness to the United States under a contract for the construction of a project has been discharged, unless otherwise provided therein the management and control thereof shall vest in the district.

SEC. 10. That upon default of the payment of principal and interest of any district bond or bonds, the board may declare the entire bond issue to be in default, and

it shall call upon the proper officers to make collection of the bonds as by law provided, and upon the failure of the officers to do so the board shall, or any owner of a bond may, take legal proceedings for collection thereof.

SEC. 11. That the unentered and unpatented lands of the United States within a district with which a contract shall have been made shall be subject to the provisions of an act entitled "An act to promote the reclamation of arid lands," approved August 11, 1916. The unentered land of the United States in a district shall be sold, at a price to be fixed by the Secretary of the Interior, in farm units, as provided herein, to citizens of the United States who are not the owners or proprietors of an area of farm land which, together with the area acquired under the provisions of this section, would exceed one hundred and sixty acres or a less area if the Secretary should so decide. The Secretary shall make regulations, general in character or applicable to specific projects, as to residence and cultivation with a view of carrying out the purpose of making the land the permanent home of a settler. An applicant shall, at the time of entering into contract of purchase, make a first payment of 10 per centum of the sale price. The balance shall be paid in amortizing payments extending over a period to be fixed by the Secretary not to exceed twenty years. The amortizing payments shall bear interest at the rate of 5 per centum, payable annually, computed from date of contract. The contract for the sale of land shall provide for its cancellation upon default and for the forfeiture of payments made under the contract for failure to comply therewith or for failure to pay any of the assessments levied against the land by the district. No transfer, mortgage, or lease of any right, title, or interest under a contract of sale shall be valid without the approval of the Secretary. Upon full compliance with the terms of a contract, patent shall be issued to the purchaser.

SEC. 12. That the Secretary shall be authorized to accept, by gift, deed in trust, or otherwise, land within any district and to dispose of the same in the same manner as provided herein for the disposition of unentered and unpatented land.

SEC. 13. That the Secretary, in entering into a contract with a district for the construction of a project, shall establish a maximum area of land which may receive a water right. A maximum area shall not exceed one hundred and sixty acres, and the excess acreage in the district shall be sold in farm units of a size as will, in the opinion of the Secretary, support a family, at prices and on terms and conditions as contained in the contract with the district. No contract affecting the land made during a period of five years from the date of sale shall be valid without the approval of the Secretary unless full payment of the purchase price of such land shall have been made.

Unless 80 per centum of all holdings within a district shall be reduced to the maximum area established by the Secretary, the project shall not be approved. The owners of excess areas shall confer an irrevocable power of attorney upon the Secretary to sell their excess lands through such agency as he may designate, whenever he may deem it for the best interests of the project to effect a sale, and shall sell the land remaining unsold after the expiration of five years at public auction. In case a State or minor subdivision thereof shall be the owner of an excess area of land within a district, the proper authority shall agree with the Secretary, in so far as it may be within their power, to dispose of excess areas as herein provided for the disposition of other excess areas.

SEC. 14. That hereafter upon the opening of any lands to entry or sale under the reclamation act of June 17, 1902, or acts supplementary thereto or amendatory thereof, and under the provision of this act, such opening, restoration, or sale shall provide for a period of not less than six months before the general opening of the lands to disposal, in which men and women and the widows of men who have served in the Army, Navy, or Marine Corps of the United States in the War with Germany, or in any other war, or during the Mexican border trouble, and who have been honorably discharged therefrom (if otherwise qualified) shall have a preference right of entry and purchase of all open public lands and excess areas in a district.

SEC. 15. To enable the Secretary to carry on and complete projects begun, or approved, and for the investigation, commencement, and completion of other projects as may be deemed feasible, the Secretary of the Treasury is authorized and directed, upon request of the Secretary of the Interior, to transfer from time to time to the credit of the Reclamation Fund such money as the Secretary of the Interior may deem necessary: *Provided*, That the amount which may thus be transferred to the Reclamation Fund during the fiscal year ending in 1922 shall not exceed $20,000,000; for the fiscal year ending 1923 not to exceed $35,000,000; for the fiscal year ending 1924 not to exceed $45,000,000; and for each succeeding year for a period of three years not to exceed $50,000,000; and the aforesaid amounts are hereby authorized to be appropriated from any moneys in the Treasury not otherwise appropriated.

SEC. 16. Beginning with the fiscal year 1942 there shall be transferred, from proceeds in the Reclamation Fund arising from the sale of district bonds herein provided for, to the Treasury of the United States $50,000,000 annually until the appropriation authorized herein, including accumulated interest, shall have been fully paid.

SEC. 17. In the construction of such projects as are authorized herein the Secretary, so far as practicable, shall utilize the services of ex-service men and women; and, as an aid to them the Secretary may, in his discretion, prior to the completion of any project, throw open for their settlement any excess area therein.

SEC. 18. Moneys paid into the reclamation fund under this act, so far as not inconsistent herewith, shall be expended under the terms and provisions of the act of June 17, 1902 (Thirty-second Statutes, page 388), known as the reclamation act, and acts amendatory thereof and supplementary thereto: *Provided further*, That all projects or units thereof upon which actual construction work shall be commenced after the passage of this act shall be organized in the manner provided herein, and all payments made from the reclamation fund on all such work shall be repaid to such fund with interest in the manner herein provided.

SEC. 19. The Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as in his discretion may be necessary for carrying the provisions of this act into full force and effect.

The CHAIRMAN. Mr. Blaine, you may proceed in your own way and make such statement as you see fit concerning this proposed legislation.

STATEMENT OF MR. E. F. BLAINE, SEATTLE, WASH., REPRESENTING THE WESTERN STATES RECLAMATION ASSOCIATION.

Mr. BLAINE. I have been interested in the reclamation of arid lands since the beginning of the present century, and am quite familiar with the different projects in the West which have been reclaimed, in whole or in part, by the Reclamation Service; more particularly, however, with those in the State of Washington.

The CHAIRMAN. Please give your full name and address, Mr. Blaine.

Mr. BLAINE. E. F. Blaine, Seattle, Wash., representing the Western States Reclamation Association.

The Western States Reclamation Association is made up of the 13 western arid and semiarid States. This organization was perfected two and a half years ago at Salt Lake City, and the active officers of the Western States Reclamation Association are the executive committee, one from each of those Western States.

I was chosen at the Salt Lake City meeting to represent the State of Washington upon the executive committee, and at the last meeting of the executive committee of the association, at Salt Lake City, a committee of five was chosen to represent the desires of the Western States with regard to further reclamation, and I was chosen as one of that committee of five. Ex-Gov. Spry was also chosen as a member of this special committee, and he was here cooperating with me until he was chosen as Commissioner of the General Land Office.

In the State of Washington, and in the Western States, I have observed that while the work being done by the Reclamation Service of our Government was of a very high order and administered honestly—I believe constantly honestly—that department has not had enough money to go ahead and complete projects that have been undertaken, within such time that the work could be done economically.

Now, in the State of Washington they have stored water in the mountains, and some of that water has gone unused, and they have investments there that are going to stand partially idle until the projects which are in contemplation are complete.

Senator KENDRICK. We have a similar experience in Wyoming with $1,500,000 invested in a dam.

Mr. BLAINE. Yes; I think that is true in different parts of the West.

I am not blaming the department for the conditions that exist in starting more projects than there was money seemingly to complete. They started out in administering the old law passed in 1902, on the theory that the land and water rights would be paid for in a period of 10 years. Later, the act of Congress was changed and the time payment was extended to 20 years. But it so happens that pretty nearly all of these projects were started by the Reclamation Service when the term or period for payment was fixed by law at 10 years. Had the law remained as it was and the people have paid up, it is probable that most of these projects which have been undertaken would now be completed. That is, if the people really had the ability to meet their payments. But that was done by act of Congress in furtherance of a public policy, so I do not think that the Reclamation Service comes in for criticism for having undertaken more projects than have been completed within a reasonable time. But in the line of good business, provision should be made for the completion of those projects.

But there are other projects in the West very meritorious, and the men of the West are extremely anxious that a law shall now be put upon the statute books under which all of the arid lands of the West, where there is water for their reclamation, shall be reclaimed within a reasonable length of time.

Now, this bill is framed in view of the work that we have in hand to do in the West being done. It is estimated that in the West there are 20,000,000 acres of land with available water for its moistening.

Senator SHEPPARD. Still unused?

Mr. BLAINE. Still unused. It is estimated that it will cost in the neighborhood of $100 per acre to reclaim that land; I say $100 an acre, I mean under normal conditions; not subnormal or abnormal, but merely normal conditions. If that is true, then it will take $2,000,000,000 to do the work, and whatever form of legislation there is enacted at the present time, it would appear to me that it ought to contemplate the reclamation of the 2,000,000 acres at a cost of $2,000,000,000.

Senator JONES. You mean 20,000,000 acres?

Mr. BLAINE. Twenty million acres, at a cost of $2,000,000,000.

Now, this bill here provides that the Government shall put up $250,000,000; not all at once; $20,000,000 during the first year; $35,000,000 in the second year; $45,000,000 in the third year; and $50,000,000 each year thereafter until $250,000,000 has been used.

Senator JONES. There are really two plans in this bill, are there not?

Mr. BLAINE. Well, I am going to reach that. That would be an investment of that capital sum by the Government in this big work. But in order that there shall be a more rapid turnover of this sum of money, the bill contemplates and provides for the organization of irrigation districts, and when a district has been formed or out-

lined and a project agreed upon among the people who own the land and the Government, if there is public land, the project is to be put up to the Secretary of the Interior for his investigation, and if upon investigation he finds the project in all ways feasible, then he will ask the district to put up its bonds in an ample amount to cover the cost of building the project. Upon the deposit of these bonds with the Federal Farm Loan Board, to be held by it, the Secretary of the Interior will go ahead and construct the works for the district.

Senator JONES. Let me ask you there, Mr. Blaine, so as to have my mind clear: I understand that the first part of this bill, projects which were taken up after the bonds were issued, etc., were to be paid for out of the proceeds of the bonds and not out of this $250,000,000?

Mr. BLAINE. In the first instance, the money is to be put up by the Government, to build each project, and the reason why that is necessary, Senator, in my judgment——

Senator JONES (interposing). So that I am wrong in that idea of the bill?

Mr. BLAINE. Well, if our minds meet, I think you are wrong. But the plan of this bill is that in the first instance the Government puts up the money to build a project, and then when the property within the project answerable for the payment of the bonds has twice the value of the outstanding bonds the bonds are sold and the money goes back into the reclamation fund.

Senator GOODING. What do you call the outstanding bonds; Government bonds?

Mr. BLAINE. No; the district bonds. Let me repeat again; maybe I can make it clear.

Senator GOODING. Yes, this is very important.

Mr. BLAINE. Your people have a project——

Senator GOODING (interposing). Yes, let us take a concrete case.

Senator KENDRICK. Will you suggest to us a little more clearly whether it involves Government lands or private lands?

Mr. BLAINE. Public and private both; it does not make any difference.

Senator GOODING. Just a minute. At the beginning, or at the inception of a project, the district puts up its bond? Let us have that clear.

Mr. BLAINE. For instance, a group of men in your State are interested in land. It may be all privately owned, or some privately owned and some publicly owned. They have in their minds a reclamation project. They put that up to the Secretary of the Interior; they present their plans of reclamation to him, and generally the outlines of the district. He makes an investigation, and if he finds the project feasible, then he agrees to go ahead and build it out of this $250,000,000, provided the district will put up its bonds to cover the total cost of the project. Those bonds are placed with the Federal Farm Loan Board.

Now, the project is completed——

Senator GOODING (interposing). Now, listen: They are merely placed with the Federal Farm Loan Board?

Mr. BLAINE. Yes.

Senator GOODING. Merely as a security?

Mr. BLAINE. These bonds are owned by the Government, because the Government goes ahead and does the work and owns the bonds.

Senator GOODING. All right.

Mr. BLAINE. Those bonds are left with the Federal Farm Loan Board until such time as the Federal Farm Loan Board shall find, at the request of the Secretary of the Interior, that the property within the district answerable for the payment of the bonds has twice the value of the then outstanding bonds. Some of them may be paid in the meantime. The Federal Farm Loan Board will sell those bonds in the open market, and the proceeds will go into the reclamation fund to be used in building other projects.

The CHAIRMAN. That is for the purpose of making liquid the funds?

Mr. BLAINE. Yes. In other words, we can not get $2,000,000,000, the ultimate capital to do the work we have in hand, unless we go about it this way, because we are satisfied that the Federal Government would not put up so large a sum out of the Federal Treasury. But we do ask the Government to put up $250,000,000, because we all know that it is next to impossible to borrow money on a security that is not in existence—one to be created; in other words, it is next to impossible to borrow money with which to go ahead and develop the arid lands of the West.

The CHAIRMAN. Under this scheme, is it not true that the United States Government is simply offering the district bonds for sale after an appraisement of the value of the land? In this way there is no obligation on the Government at all?

Mr. BLAINE. Yes. When the Federal Government has put up $250,000,000 it is in no way responsible for the bonds. The bonds will be sold without any guarantee by the Government.

The CHAIRMAN. Is it not possible that the lands of the district will double in value within four or five years after the completion of the work?

Mr. BLAINE. That is our experience in the West. We sent out asking for the returns upon different projects in the West, and we have a letter here from the Carlsbad Chamber of Commerce, in which it is stated that the assessed value of the farms within the Carlsbad district is $1,423,963, while the assessed valuation of the town is $2,000,000.

Senator JONES. And isn't it a fact, Mr. Blaine, that those lands will double within less than that time, when water is assured for them?

Mr. BLAINE. That is my experience. As soon as the water is put on, then the lands readily sell for a sum far in excess of the cost of the reclamation, and the lands without water are of very little value, so the value is added or created by bringing the water to the land.

Senator JONES. You do not even have to wait for the water?

Mr. BLAINE. No; you do not have to wait.

Senator JONES. When the water is assured, the lands become far more valuable than in their regular arid state?

Mr. BLAINE. That is true.

Senator GOODING. They have no value at all before the water is assured?

Mr. BLAINE. No. But I wish to call attention to this particular fact, that the towns within a project have a larger assessed valuation than the reclaimed lands of the project, and that is true in my section.

I know the city of Yakima, the assessed valuation of that town is as great, if not greater than the reclaimed lands about it, and yet the town is the result of reclamation.

Senator KENDRICK. The direct result?

Mr. BLAINE. Yes; the direct result. There is nothing strange about that.

And then, on these reclaimed lands, mind you, there is a large amount of money comes in from the outside for investment. And under this system I am satisfied there will be no difficulty with people who are actual settlers borrowing money to make improvements on their farms. So I am expecting, and it has been my experience that within a very short time after a project is completed, and sometimes before a project is completed, that the land within the project will have a value of twice the cost of the project.

Senator JONES. Then, as I understand this bill, Mr. Blaine, it is for the Government to put up $250,000,000, and not only have the receipts that come in from the settlers under the regular terms of the reclamation act to insure its repayment to the Government, but also it has the added security of the bonds on these districts and it may be repaid in a very short while?

Mr. BLAINE. Yes, sir.

Senator JONES. Without waiting for the full length of time that would come under the regular reclamation act?

Mr. BLAINE. That is right, Senator, and under this bill all the property within the district—all the real property, and things that go with real property, are answerable for the payment of the bonds.

Senator PHIPPS. There is one matter I want to clear up. Is it your understanding that a private citizen or a group of citizens owning a large body of land would come under the provisions of this bill, or the territory to be embraced would have to be a political subdivision of a State or Territory? As I read the bill it must be some political subdivision of the land to be covered.

Mr. BLAINE. It is a district in the nature of a municipality. Generally it would be less than a State; it might be the State, but I think it would be a district.

Senator PHIPPS. Then it is your idea or understanding that if a group of citizens owning contiguous property can form an irrigation district, they then come under the provisions of this bill?

Mr. BLAINE. Yes; that is true; but there is a further——

Senator PHIPPS (interposing). I did not catch that.

Mr. BLAINE. Yes; that is true.

Senator PHIPPS. I thought that, but I did not understand it.

Senator GOODING. Only those whose lands had received water rights would have to pay the bonds; all the property would be responsible?

Mr. BLAINE. All the land within the district receiving water.

Senator GOODING. But only those buying the water rights would have to meet the bonds in the end.

Mr. BLAINE. Yes; that is true.

Now, where a district is formed, the Secretary of the Interior will fix the farm unit, and all land owned by private parties in excess of that farm unit must be turned over to the Secretary, to be sold by him at a price and on the terms fixed at the time of the formation of the district.

This bill contemplates soldier settlement, and it is of the utmost importance that before a project goes ahead, where we are looking for settlement by soldiers, that the price at which the excess land, and the terms and conditions upon which it shall be sold to those soldiers, shall be fixed in the beginning. I think it is very important that this should be done, because, in my judgment, the increased value of the land, brought about by reclamation, should be passed on to the soldier, and if not to the soldier, in my judgment to the settlers.

Senator KENDRICK. Mr. Blaine, I would like to be clear on one point: Is it proposed here that this district land is the only land under which this $250,000,000 will be employed; will the Secretary not be at liberty to go out and make selections of projects without that system of having it thrown into a district.

Mr. BLAINE. Under this bill, he is authorized to use some of the money to complete existing projects.

Senator KENDRICK. Yes; but not to take up new ones?

Mr. BLAINE. No; not to take up new ones, except on Government land and private land. Now, the Government land can be thrown into a district and be sold.

Senator JONES. Do you think the language of section 15 confines him to land and projects begun under this act? It says:

> To enable the Secretary to carry on and complete projects begun, or approved, and for the investigation, commencement, and completion of other projects as may be deemed feasible, the Secretary of the Treasury is authorized and directed, upon the request of the Secretary of the Interior, to transfer from time to time to the credit of the reclamation fund such money as the Secretary of the Interior may deem necessary.

Now, he has authority under the general reclamation act to approve projects, and I take it under this language he can take this money for a regular reclamation project. I think he ought to have it also.

Senator WALSH. Does it say "projects already approved"?

Senator JONES. I think we should make that clear.

Senator PHIPPS. I suggest the witness be allowed to answer the question, so we can get it straight.

Senator KENDRICK. I want to make clear to Mr. Blaine what I want, so that he will have the benefit of the question.

Mr. BLAINE. Yes.

Senator KENDRICK. Now, there are great territories in my State in which there are practically no settlements; I know of 200,000 or 300,000 acres where there are no settlers, practically, with abundant water supply, but entirely, or almost entirely, isolated from settlement. Now, it would seem impossible that a district could be formed there, and yet there is undoubtedly a very inviting field of development. So this bill, it seems to me, ought to carry the authority to proceed in cases where it is necessary, without a district.

Mr. BLAINE. I think now, even in the case you have put, Senator, there are settlers there who would come into a district, and all Government land can come into a district.

Senator KENDRICK. Nearly all of the land I have in mind is Government land.

Mr. BLAINE. Well, it would not make much difference under this bill, as I bear it in mind. There might be 5 per cent owned by the private individuals, but the Government and the citizens can go

together and form a district. But, of course, the Government lands bear their portion of the cost. The Government land will be sold. You see, in that instance it would work out. So I think this bill is broad enough in terms to cover almost any condition that you find in the West. At least, we have had it in mind to make it broad enough.

Senator GOODING. I would like to ask if you think this bill repeals the present reclamation act?

Mr. BLAINE. It does not; it is in furtherance of the reclamation act, and not in conflict with it.

Senator GOODING. I think a word or two would be necessary in section 15 so that it would be clear that the reclamation act should be still enforced, and the Secretary could go out and do such work as the Senator from Wyoming has described.

Mr. BLAINE. I think it is in there. It can be cleared up, if there is any doubt as to the correctness of the bill in that respect. But I am quite positive that if there are only a few settlers and the balance of the land belongs to the Government, it can be united in a district.

Senator KENDRICK. If I may go back with you a moment, it seems to me that if there are a limited number of settlers the possibility of taking action would be reduced in that proportion, because this limited number of settlers, having their own land, would not want to place it all under the obligations of the district in order to take care of the immense project; they would be rather inclined to stay out of it. But if there were a large number, they would feel there was strength in union, and safety in such a plan.

Mr. BLAINE. Yes.

Senator KENDRICK. That seems to put it——

Mr. BLAINE (interposing). I will be pleased to look over the bill with that in mind.

Senator KENDRICK. Yes; I did not want to interrupt you.

Senator JONES. Let me ask you, Mr. Blaine, was it the intention of those who framed this bill to limit the authority of the Secretary of the Interior under the present reclamation act in the handling of moneys under the present act?

Mr. BLAINE. Oh, no; there is no idea of interfering with that at all.

Senator JONES. Under that he has authority to go on and approve projects?

Mr. BLAINE. Oh, yes.

Senator JONES. Then he should be permitted to use this money for the carrying on of these projects?

Mr. BLAINE. Yes, sir.

Senator JONES. And if there is any doubt about that, we should put it in the bill.

Mr. BLAINE. Yes; that is right.

Senator WALSH. That would be done. The word "begun" might apply to already begun; and the word "approved" might also apply that way, so that it would be construed work already begun or already approved.

Senator JONES. It might be construed that way.

Senator WALSH. When you speak of things to be approved in the future, or to be begun in the future, you do not need that language at all.

Senator JONES. Yes; we ought to make that plain when we come to the particular terms of the bill.

Mr. BLAINE. Now, I will call attention to the contemplated expenditure of the $250,000,000. The bill calls for an expenditure of $20,000,000 during the first year of the life of the bill, $35,000,000 during the second year, $45,000,000 during the third year, and $50,000,000 each year thereafter until the $250,000,000 is used up.

The CHAIRMAN. That is found on page 10 of the bill.

Mr. BLAINE. Now, it would take six years under such a plan to use up the $250,000,000, and the question arises whether there would be a hitch in the work of the Reclamation Service at the end of that time; whether we would run our machine with all cylinders striking for six years, and then all of a sudden it would not work. I have made some calculations upon that. The bill contemplates the payment of 5 per cent on the money by the districts, and this interest would run from the allotment of the money, or the paying over of the money to the projects, and under the system that is now in vogue in the Reclamation Service an allotment is made to certain projects, and that time would be the time when the interest would commence to run. So, say our first $20,000,000 would commence drawing interest as soon as it was allotted, and at the end of the first year there would be $800,000 of interest, at the end of six years the principal and interest would amount to $282,000,000.

If we started with smaller projects first and completed them, it would appear that enough money would be coming in from the sale of bonds from the smaller projects to have $50,000,000 to spend for the seventh year, and if we had $50,000,000 for the seventh year there would be no question about the eighth, the ninth, and the tenth years, if this is a feasible plan at all.

The CHAIRMAN. Pardon me, Mr. Blaine, how many turnovers do you contemplate that the $250,000,000 will make in 20 years?

Mr. BLAINE. In 18 years, three.

The CHAIRMAN. Have you made estimates on the amount of each turnover?

Mr. BLAINE. I have. The first turnover, as I said, of this sum would be $282,000,000, the next turnover would be $357,000,000, and the third turnover would be $452,000,000, or a total turnover of $1,093,000,000.

Now, we have in the reclamation fund at the present time, which is invested, of course, $122,000,000, and I am estimating that there will annually come in from the sale of public lands and the leases of oil lands under the power bill $15,000,000 a year, or in the neighborhood, for the 20 years, of $300,000,000, making a grand total of $1,515,000,000.

The CHAIRMAN. Coming into the reclamation fund in the period of 18 years?

Mr. BLAINE. Yes; practically 18 years. Of course, at the end of 1942 we commence paying back. We do not pay it all back in one year, but during a period of years. So at the end of that time there will be plenty of funds to complete projects. So it does look as though we would have pretty close to the $2,000,000,000 to finance the projects of the West.

Senator PHIPPS. I understand, of course, that this becomes a revolving fund, and the full amount would not be available until the year 1942?

Mr. BLAINE. Yes, sir.

Senator PHIPPS. I did not quite follow you in your apparently figuring that the accumulation of interest will be available for reinvestment.

Mr. BLAINE. It will be if the bonds sell. The interest during construction may be capitalized, which this bill permits to be done, but whether capitalized or not, that interest will come into the reclamation fund and will swell the reclamation fund when you sell the bonds.

The CHAIRMAN. You not only swell the reclamation fund, but the interest?

Mr. BLAINE. Yes, sir.

The CHAIRMAN. And each time it revolves it makes a larger sum of money?

Mr. BLAINE. Yes, sir. Now, I have calculated this interest at 4 per cent, while the bonds draw 5 per cent. I have calculated the interest at 4 per cent, because there will be rest periods, or we have allowed 20 per cent as a working capital. But whatever interest accumulates on the bonds belongs to the Federal Government, although it can be used for reclaiming lands. In fact, all this fund belongs to the Federal Government at all times, because it is only the Federal Government taking it out of one part of its chest and putting it in another part of its chest for certain uses.

Now, that is all I have to say in regard to the bill, unless there is some question I may be able to answer. I feel, however, that, independent of all conditions which now exist, the conditions brought about by the war, that the people of the West have a strong claim upon the Federal Government for money to reclaim these arid lands. In my State there has been set over into a forest reserve something over 5,000,000 acres of land, and the Forestry Department of the United States has estimated the amount of timber—merchantable timber—on that reserve at 90,000,000,000 feet, and I can not tell you how many billion cords of firewood besides. At the present time that standing timber is worth in the neighborhood of $2 per thousand feet. That amount of wealth is withdrawn in my State, being reserved to the people of the whole country. We can not tax it; it does not bear any part of the burdens of the State Government. I think what is true of my State is true of Senator McNary's State. I do not know but the amount in his State exceeds the amount in my State. In California there are very large withdrawals there, and in Idaho the same.

Senator CAMERON. And in Arizona.

Mr. BLAINE. Yes; in Arizona. In our State, I do not know that we have any objection to its being tied up and allowed to serve a good use for the people of the East and all over the country, but we do believe that is an element that should be taken into consideration, and we come down here and say we want a loan—and it is simply a loan on interest, with which to do work of an internal nature out in the West.

Senator JONES. Mr. Blaine, I notice in section 18, page 11, of the bill a proviso which seems to be different from the language spoken

of awhile ago not to limit the Secretary in construction work. [Reading:]

Provided further, That all projects or units thereof upon which actual construction work shall be commenced after the passage of this act shall be organized in the manner provided herein, and all payments made from the reclamation fund on all such work shall be repaid to such fund with interest in the manner herein provided.

In other words, the Secretary, after the passage of this act, can not carry on and approve a project unless he does it under this act?

Mr. BLAINE. I think that is the difference in our minds, Senator. I have it in my mind that just a few settlers in the neighborhood of a large area of public-owned land, that those settlers and the Government can organize a district, and can go right ahead.

Senator JONES. Take, for instance, the Yakima project; there are some units in that project that have not been undertaken yet. Now, when this is done, the Secretary can carry on units just as before. But if this is passed, he can not carry on those units unless he organizes a district and comes in under the terms of this act; did you intend to do that?

Mr. BLAINE. That is true, with the money in this act.

Senator JONES. The money, of course, goes into the reclamation fund?

Mr. BLAINE. Yes, sir.

Senator JONES. You are limiting, then, the authority of the Secretary under the present law.

Senator ODDIE. It is intended to enlarge it.

The CHAIRMAN. All the money going into the reclamation fund shall hereafter bear interest?

Mr. BLAINE. Yes; that is, all money coming in from this source shall bear interest. What comes in from other sources does not bear interest.

Senator KENDRICK. Now, Mr. Blaine, right there; on your assumption that a few settlers might organize a district, then the bonds that they issue shall be turned over to the Federal Farm Loan Board and bear interest from that time on?

Mr. BLAINE. There is a provision in here that interest whether paid or capitalized shall be calculated only upon advances. An amount of interest actually paid on a bond would not be interest calculated on the bonds from the time of their deposit with the Federal Farm Loan Board, but would be calculated on advances made. That would be an adjustable matter.

Senator KENDRICK. In other words, whether the interest was paid or not, the bonds would carry that much increased value; is that the idea?

Mr. BLAINE. Yes, sir.

Senator KENDRICK. In their sale?

Mr. BLAINE. Yes; it does not make any difference. The interest is in there, and the interest that has been earned down to the time of the sale belongs to the Government.

Senator WALSH. Under the old system, if a project were inaugurated under that, the settlers would simply pay back the amount in 20 annual installments without any interest whatever, while in a system organized under this act they would have to pay not only the original cost, but 5 per cent interest in addition; so you can not run the two systems contrary, could you?

Senator JONES. Yes; but take the complications on the Yakima project; here is one unit of that project completed; the settlers will simply pay back the cost, without interest. And yet here is another unit right adjoining this one, and they go in under this and the settlers on that land have to pay the cost and interest. I do not say that that should not be. So far as I am personally concerned, I am not a believer in the interest proposition. I do not believe the settlers ought to have to pay it. I believe the Government is very greatly benefited by going right along under the policy that we have been pursuing before. I wanted to put that in the record.

Senator WALSH. I think we all concede that. But it is a question of what we have to do to get the help.

Mr. BLAINE. What has been in my mind in regard to the use of funds that do not bear interest and the use of funds that will bear interest, is that the money that does not bear interest ought to be used and so distributed over all projects, whether now undertaken or hereafter undertaken, as to make the burden in each district as light as possible, trying to give each district the benefit of some of the money that does not bear interest.

Now, I am familiar with the condition that the Senator speaks of, and I am quite sure that that land out there can more readily bear an interest charge than some land farther away from highly developed districts or sections. And while I am very friendly to those people, I think for the fullest development of the State and of the West, that if we could put them all on an equality and make them share the benefits and the burdens we would be better off.

Senator WALSH. I want to point out that there is much want of equality. I heard the proposition made this way, which will enforce the idea I have in mind: That the Government is really giving to the settlers the capital invested; he pays in 20 annual installments, which is 20 per cent of the capital each year, which is really only interest. In other words, the settler now pays interest on the investment for 20 years, and then he gets it. Now, when he pays interest for 20 years at 5 per cent and then is obliged to return the capital, he is paying just twice as much as the man is now under the present system.

Mr. BLAINE. That is true.

Senator PITTMAN. In some cases it will amount to $100 an acre.

Senator JONES. Yes; in some cases more than that.

The CHAIRMAN. Have you any further statement to make?

Mr. BLAINE. No; I have no further statement.

The CHAIRMAN. Have you the memorial passed by the United States Chamber of Commerce at Atlantic City recently?

Mr. BLAINE. I have only taken out of the body of their resolutions one paragraph. I would be glad to furnish the complete resolutions.

The CHAIRMAN. Just read what you have there to the committee, and for the record.

Mr. BLAINE (reading):

The chamber deplores any tardiness in generous treatment for all who served in the armed forces and who became the widows and orphans of those who lost their lives while serving in the armed forces. The chamber approves such constructive measures as may be directly calculated to enable ex-service men to cultivate the soil, build homes, or obtain vocational education. For the purpose of affording ex-service men an opportunity to cultivate the soil, we favor a national system of reclaiming waste areas. Such a system initiated through adequate Federal appropriations can be made a means which, while providing opportunity directly for former members of the armed forces, will advance the national interest. The chamber, however, calls attention to the fact that a general cash bonus or its equivalent in certificates would mean a very heavy increase in the burden upon the entire community. For this reason the chamber favors forms of assistance other than a cash bonus.

I will be glad to furnish a copy of all the resolutions passed by the chamber. I will put this in in the meantime.

Senator KENDRICK. Well, it certainly does seem unfair to the soldier, if this is to remain a soldiers' settlement bill, to charge him interest; the interest, as Senator Walsh has pointed out, to be equivalent to the principal, and then require him to pay the principal on top of that at the end of 20 years when our method of applying this in the past to the average citizens is to give them the land free after they have paid 20 years' interest. It does not seem much like a soldier settlement bill.

Mr. BLAINE. Well, it is barely possible in years to come there will be further relief to the soldier. We can not say exactly what the Government will do in the future for the soldier, but this bill will create an opportunity for him in the future to get a piece of land; at the present time he can not get any land. This is something that will do the soldier an immense amount of good if he stays on the land, after he gets his deed or patent; then if he wants to he can sell his land at a substantial advance over what it has cost him. This is the history of reclamation and of reclaimed lands in the West.

Senator JONES. Let me ask you: Is there any particular reason why those who framed this bill put in the interest charge, other than the thought that it was necessary to get the legislation?

Mr. BLAINE. There seems to be a difference between the Senators and the Representatives on this matter. It is probably going to be a harder matter to pass this bill through the House than to get it through the Senate. In the House there will be probably more strenuous objections to it than in the Senate. The Representatives think it will make the burden much lighter over there.

Senator JONES. As Senator Kendrick says, that will put a burden on the soldier that they have not put on the average citizen.

Mr. BLAINE. That is true; but the theory of the present law is that the money for past development came out of the West, from the sale of public lands, and now we are asking leave to go into the National Treasury to take the tax money of the East.

Senator JONES. That is about the same thing.

Mr. BLAINE. I quite agree with you, but we used to make the arguments the other way 20 years ago, and they may dig up those arguments.

Senator KENDRICK. That is true, that while these lands have increased in value, those who have farmed them during the past few years in the high prices during the war, we will say, profited by those operations, but there were many years after the passage of the reclamation act, and before, that those who occupied those reclaimed lands were just driven to the hardest kind of experience to pay their expenses and to live. That is a fact in the States with which I am familiar, like Wyoming and Montana. I can not say how it was in Washington.

Senator JONES. That is a good deal the condition right now. Freight rates are so high that they can not get their produce to the markets.

Senator KENDRICK. It makes the shipment of products prohibitive. Why, there are potatoes stored in my State to-day that will not pay the freight rate to the market. There is hay in thousands of tons along the railroads that will not pay the freight. And they are having a very difficult time to even make a living now.

Mr. BLAINE. Well, I think there has got to be a readjustment of the freight rates. I can not conceive of wages on railroads being at a peak and farmers who do a harder work and put in more hours of labor each day just receiving a very nominal sum per day as a return on their efforts. I do not think that condition can continue. I think we are coming down in every line of activity. We are coming down in prices of material and labor to a normal level, and we will move out from that normal level, and when that time comes the farmer will come into his own. It is only a temporary condition as to the farmer.

Now, in the West the turnover of farmers is less than any place in the United States. It is only 1.4 per cent. It is less on the reclaimed lands than any other part of the United States.

Senator ODDIE. We found that before the war and Government project on the farms they had a very difficult time in meeting their obligations, even in normal times. It seems to me now that these things should be eliminated from the bill, and that this be fought out with the House.

Senator KENDRICK. Let me ask: Has there been any plan or purpose to combine this bill with the so-called soldiers' bonus bill in any way?

The CHAIRMAN. There has been no legislative plan in any way. This hearing is called for the purpose of bringing out the points in this legislation. It is hoped that it might be enacted before the soldiers' bonus bill comes up. This bill might take the place of the fivefold plan in the Fordney bill.

Senator JONES. Has this bill been referred to the Department of the Interior?

The CHAIRMAN. Yes.

Mr. BLAINE. Mr. Chairman, just about this soldier matter. I have studied the other bills introduced, the so-called soldier-bonus bills, and as near as I can make out, under the provisions of those bills very little land could be reclaimed for the soldiers. All those bills, so far as I know, only provide for the use of a capital fund, and the money to go back, when it comes in, into the General Treasury, so you run a few years and stop; so at the most you can only accommodate 20,000 or 25,000 soldiers, while under this bill, if it works as we think it will, it will accommodate 200,000 soldiers, just in the reclamation of the arid lands of the West. So that, in my judgment, this is a far better soldier bill than any other of the bills heretofore introduced in either house.

Senator JONES. But this is not intended primarily as a soldier bill?

Mr. BLAINE. It is not, but it will do more good for the soldier than any other bill introduced since the war.

Senator KENDRICK. That thought, in my mind, was suggested by the thought that possibly we might come nearer to getting the funds if we took the two things and combined them, if this reclamation were combined with the soldier bill.

Mr. BLAINE. It may do that.

Senator KENDRICK. The necessity for that kind of action is evident to everyone. It is clear to us all, and everyone, I think, is committed, or willing, at least, to have a plan of giving the soldier an opportunity rather than money. Now, if we had that in a line with a great plan of national development, it seems to me that nothing could be more sensible, and nothing could be more practicable nor of more benefit to the whole country. It has occurred to me that the two plans might well be combined, or that this might well be made a soldiers' bill.

Senator PHIPPS. In the provision for the sale of surplus lands there is an opportunity there to give a preference in the sale to ex-service men. I think that suggestion is well worthy of consideration by this committee in drafting a bill.

Mr. BLAINE. As this bill was first drawn, we made a provision in it that the soldier should get 50 per cent of all the land, but it has been changed so that the soldier has a preference right on all surplus areas, and it is the opinion of some that this gives the soldiers more land than if on one project with another they received 50 per cent of the land. Of course this bill must be administered by the Secretary of the Interior, and I have no doubt the soldiers will be up there saying that he should undertake such projects as will give them a substantial part of the land.

Senator KENDRICK. I think that would be right, but I think it would be better if we provided for the actual reclamation of the land and in doing so gave the soldier a real advantage and benefit, and at the same time required the State to provide him with the necessary improvements and equipment to proceed as the occupant of the land. That has been done in a very practical way in New South Wales and is now, I think, in operation in California.

Senator JONES. Personally, I think it would be a mistake for us to try to make this a soldiers' bill. I think we ought to go on with the primary purpose of irrigation and reclamation. I think we can get something in that way, giving preference, however, to the soldiers, and let the special legislation for the soldiers come up in another bill.

The CHAIRMAN. Mr. Blaine, do you desire to make any further statement to the committee?

Mr. BLAINE. No; nothing further, Mr. Chairman.

The CHAIRMAN. Does any other member of the committee desire to ask Mr. Blaine any further questions about this bill, or any other matter with which he is familiar? [After a pause.] When will Gov. Spry desire to be heard?

Mr. BLAINE. He said he would be prepared in a coupe of days to come before the committee.

The CHAIRMAN. And can Mr. Bien come to-morrow?

Mr. BLAINE. No; Mr. Bien has not his data up yet. He wants a couple of days to get his date in shape.

The CHAIRMAN. To what day should we adjourn?

Mr. BLAINE. I should say Friday.

The CHAIRMAN. If that will be agreeable to the members of the committee, we will meet on Friday, at 10.30, to hear Gov. Spry.

The committee will stand adjourned to meet at this place at 10.30 o'clock on Friday morning.

(Whereupon, at 11 o'clock and 40 minutes a. m., the committee adjourned to meet on Friday, May 6, 1921, at 10.30 o'clock a. m.)

COOPERATIVE RECLAMATION ACT.

FRIDAY, MAY 6, 1921.

UNITED STATES SENATE,
COMMITTEE ON IRRIGATION AND RECLAMATION,
Washington, D. C.

The committee met, pursuant to adjournment, at 10.30 o'clock a. m., in room 442, Senate Office Building, Senator Charles L. McNary presiding.

Present: Senators McNary (chairman), Jones, Phipps, Gooding, Oddie, Walsh, Kendrick, and Pittman.

The CHAIRMAN. We will call Mr. Jones, of the Stars and Stripes.

STATEMENT OF MR. RICHARD SEELYE JONES, EDITOR AND MANAGER OF THE STARS AND STRIPES, WASHINGTON, D. C.

The CHAIRMAN. Mr. Jones, will you give, for the record, your name in full and present occupation?

Mr. JONES. Richard Seelye Jones, editor of the Stars and Stripes.

The CHAIRMAN. To what purpose is that magazine devoted?

Mr. JONES. That is a weekly newspaper devoted to the interests of the former service men of the World War.

The CHAIRMAN. Where is it published?

Mr. JONES. Washington, D. C.

The CHAIRMAN. How large a circulation does it have?

Mr. JONES. One hundred and forty thousand weekly.

The CHAIRMAN. The committee is here for the purpose of considering Senate bill 536. You were here a few days ago, Mr. Jones, when Mr. Blaine gave his views on the bill before the committee. Have you read this measure, Mr. Jones?

Mr. JONES. Yes; I have.

The CHAIRMAN. I wish you would in your own way discuss the features of it from the soldiers' standpoint, and give the committee such views as you may have with reference to the bill.

Mr. JONES. I read the bill, Mr. Chairman, with a view almost solely to the soldier features of it, although I am a western man, and very much interested in reclamation personally, but from a business standpoint, naturally, in the soldier feature of the bill.

I have been very closely in touch for the last two years with practically all soldier legislation, so-called, including the various land measures. Those land measures, beginning with the loan bill of Congressman Morgan, now dead—I think that was the first widely-discussed soldier land bill—have been very numerous, and at no time have they been developed by persons sufficiently expert or

sufficiently experienced in land settlement or land development, to lay before either House of Congress any bill which even appeared to have a likelihood of being enacted into law. In other words, you might say they have been amateur pieces of proposed legislation.

The outcome of most effort in that line is the land-settlement feature of the so-called bonus bill, the fourfold bill, or the Fordney bill. Now, the soldier organizations—I don't speak officially for any organization, although I belong to practically all of them—have as a rule indorsed the Fordney bill, and probably with very little attention to the land-settlement features of it; I mean, with very little expert attention as to whether the land-settlement feature of the Fordney bill would actually settle land or put soldiers on the land. I am not aware exactly who drafted those features of the Fordney bill. I attended the American Legion meetings when the bill was drafted and redrafted, and of course it was afterwards redrafted in the Ways and Means Committee of the House, and I happen to know from my personal attendance at that time that the land features at that time were not considered by any great number of people who had any experience of a practical nature in the settlement of lands, especially the settlement of arid lands, irrigation lands, which the bill purports to provide for.

The bill which you now have before you, which we have referred to as the Smith-McNary bill, of course is not a bonus bill. I don't assume it purports to be a bouns bill. And from my contact with a great number of organizations and with individuals who were soldiers in the World War, and who are interested in soldier legislation, I am inclined to think that from the ex-soldiers you would find great opposition to this bill if it purported to be a substitute for the bonus bill.

The bonus bill contains a great many things besides land settlement. But it is my opinion, from what study I have given the new measure, that as a land-settlement proposition it is very much more practical than the land-settlement features of the bonus bill. I think that it has come closer, if not arrived, at a point of practical measure of putting their land under cultivation by the process of irrigation than anything that has been projected in the last two years, and that while it does not provide a bonus it does provide substantial benefits to the ex-soldier, both in the matter of the preference rights to be employed on the irrigation project and in the preference right to settle the land, which will be very valuable to the former soldier.

Senator JONES, of Washington. Will you permit me, Mr. Jones, I want to ask the chairman: Is there any question on the part of anyone that this is not primarily a reclamation measure; that that is the primary purpose of it?

The CHAIRMAN. Oh, yes; certainly; that is the purpose; there is no question about that.

Senator JONES of Washington. I think that that ought to be made clear so as to support the proposition that Mr. Jones makes.

The CHAIRMAN. Yes.

Senator JONES of Washington. This is not intended as a substitute for any soldier bonus legislation or soldier settlement legislation; it is primarily a reclamation measure, with a provision in it giving soldiers rights.

The CHAIRMAN. Containing practical benefits of which the soldier can take advantage.

Senator JONES of Washington. Yes.

Mr. JONES. Our newspaper had a very interesting experience about a year ago this time when the Shoshone project, I think it was called, and the North Platte project—both of those projects—were opened. They were rather small irrigation projects. I remember one of them contained 80 farms. At that time—and the law is still in effect, although it expires in another year—there was a 60-day preference for the ex-soldiers of the World War. There were over 3,000 applications—3,200 applications, if I am not mistaken—for 80 farms, in one of those projects. I think that was the North Platte. There were 80 farms available, and something like 3,200 applications which were perfected to the point of the applicant making the deposit on the water right, as provided. I think there was in excess of $1,250,000 cash deposited by the former soldiers. Of course, only 80 of them could get farms. That condition came to our attention by the complaints of some of the soldiers who had made trips to this project to look it over, who had had very little information, except just a general idea had come to them that at this place there was some land for soldiers.

It is very unfortunate in every land settlement move that a great many people get the idea that they want land and go to some expense to go and get it without any previous information as to whether they have a real opportunity or not.

We then took it up through our service department, which is in contact with a good many thousand soldiers through letters, and investigated. We could not do much on those projects, because the men had already gone, and the date for the opening had already arrived, or practically so.

The next land opening was not an irrigated project, but was the opening of some public lands in the State of Oregon. I have forgotten what they were called. I think they were near Salem. I think Senator McNary knows where they are.

The CHAIRMAN. The southern part of the State, near Ashland.

Mr. JONES. The usual announcement went out that these lands would be available, and, of course, the ex-soldiers had the same 60 days' preference as in the other cases. We sent a man down from Portland, Oreg., to investigate the situation, and he reported that there was practically no land there available that was worth claiming; that the tillable ground there that was in any shape to be tilled had been all taken by squatters, and that it was absolutely a waste of time and useless for soldiers to visit that area. The chamber of commerce of the city that was nearest to it—it may have been Ashland; whatever city was closest to this land—took the rather remarkable attitude for a chamber of commerce that instead of encouraging people to come there they sent out broadcast the announcement that their chamber of commerce did not recommend that any ex-soldier or other person should come to that community with a view of taking that land.

Through our efforts then the American Legion in the State of Oregon was interested, and they sent out similar information through the American Legion in other States, and I think that those combined efforts were instrumental in preventing the great and needless rush of soldiers to that land.

The reason I say that it did prevent such a rush was that we had a great many hundreds, and probably several thousand, inquiries about that Oregon land. I haven't the exact figures, but I know that that condition of inquiry about land has been maintained through the Land Office channels even up to the present time. I think the Director of the Reclamation Service told us about a month ago that he was getting 40 and 50 letters a day, despite the fact that soldiers have been pretty well discouraged, and so far as newspaper channels have been concerned, have been informed that in substance there is no land at the present time of any great value—no public domain, I mean—that is available for settlement of any great value. But the demand still exists, and the inquiries still come in.

When the soldiers' bonus bill was first drafted and laid before the Ways and Means Committee of the House, our paper undertook a not extremely accurate but a generally accurate straw vote among our soldiers as to their preference as to what sort of bonus they would take if they were given any form of adjusted compensation by the Government. The result of about 150,000 votes that we got—and each vote was signed by the name and address of the soldier, so it was accurate to that extent—was overwhlemingly in favor of the cash bonus at that time.

Senator JONES of Washington. Could you estimate what percentage, Mr. Jones?

Mr. JONES. I think more than 80 per cent of the total were in favor of the cash bonus, as I recollect it. The next choice, in fact almost the only other choice that had any percentage of votes, was in favor of some form of land settlement. I think that that test vote was labeled, "Farm or home aid or loans."

In the early consideration of the adjusted compensation there was considerable thought about some sort of farm or home-building loan from the Government. The other propositions of paid-up insurance or vocational education, and so on, had very little support.

We also found at that time that as the votes came from farther west, especially beginning west of the Mississippi River, the proportion in favor of land settlement was much larger, and probably a very natural condition, because the western man has some information about land, and the eastern man had this idea—they have never been West, and they don't know what irrigated land is, and they are not informed about it.

Senator JONES of Washington. It is rather surprising, however, that in the State of Washington my recollection is that the percentage was even greater than the 80 per cent that you speak of, of those who wanted the cash, and there was a very small percentage of those who wanted to take up land.

Mr. JONES. Now, my recollection was that Washington was one of the States where there was quite a percentage for the land. The Seattle Post-Intelligencer and the Everett Tribune cooperated with us in that vote.

Senator JONES of Washington. I am only judging from the cards that came to me.

Mr. JONES. Those were the post cards that came to you, Senator?

Senator JONES of Washington. Yes.

Mr. JONES. That was a subsequent poll, and I think that in some way in the wording of it there was something that made a difference,

or possibly developments that started some months later. Of course, we didn't get those in our office. Those post cards went to the Senators. But Senator Smoot tabulated the post cards he received, and several Senators tabulated the post cards they received, and they found a much greater proportion of soldiers voting for a cash bonus than we did in our poll, where the votes came to our office, and were sent to the Representatives.

Senator JONES of Washington. Ninety-five per cent of those that came to me, as I recollect.

Mr. JONES. I think those were Senator Smoot's figures, also, Senator.

Because I was primarily interested in land, because I am a western man, and know something about it, and have worked on irrigated land and seen it developed successfully, I personally believed that an opportunity to settle land was worth more to an ex-soldier than a general payment in cash, and thought that purely from the soldier's standpoint the land feature would be more helpful.

I have been to some pains in investigating the various bills and the various opportunities and the demand for land. I wrote to the Canadian Land Settlement Board. They have a board operating under a bill which authorized farm loans. It is not a reclamation plan at all. It authorizes loans to be paid former soldier settlers up to a maximum of $4,500. It has been in operation for about two years, I think. The board which has control of it is authorized to investigate the applicant's ability as a farmer, and determine whether he is likely to succeed as a farmer, and this board has a large appropriation of which it has expended about $70,000,000 and has approved about $10,000,000 more, as shown in the last data that I had from them. And if it finds the applicant unsuited for farming, it is authorized to put him in training, which practically means to send him out as an apprentice to a farmer, and let him take training.

However, their principal business is the purchase of land, which they resell to the settlers, and the purchase of live stock and equipment, which they purchase wholesale and resell at cost to the soldier settlers.

I wrote to them recently for their annual report, which is not available. The information officer of the board, called the Soldier Settlement Board of Canada, said there was no annual report available, but he sent me a partial report as of November 30, 1920. That report shows as follows:

That the number of veterans in communication with the board was 100,000.

That the number who had applied for privileges under the act was 58,811.

The number accepted as qualified to farm was 41,906.

The number qualified, but not yet located, 21,975.

The number in training under supervision of the board was 916.

The number who had completed training was 1,444.

Their loan report at that time showed the number of loans granted as 19,931 and the amount of loans approved, $80,302,649.

Out of that there had been disbursed $70,281,872.

Senator GOODING. What rate of interest is charged there, do you know?

Mr. JONES. Five per cent.

Senator GOODING. Five per cent?

Mr. JONES. Yes. Under certain considerations no interest is charged for the first year, and on some loans there is none for the second year. I have forgotten just what conditions those are. I believe live-stock loans or equipment loans have little different terms. On some of their loans there is no interest charged the first or second year. I think when he gets a land loan the interest begins immediately.

Senator JONES of Washington. What are the terms of repayment?

Mr. JONES. I think they are 20 years. The data I have on their loan system is not sufficiently complete to show whether the land purchases or the equipment loans have been the most numerous. They just give the lump sum on the loans. They show that when the first repayments were due 59 per cent had made their payments as of the date due—that is, the formal date—which does not mean that the other percentage necessarily were failures, but 59 per cent made their payment without question. And that during that time the number of failures and changes of ownership adjusted was 166.

Senator PHIPPS. One hundred and sixty-six?

Mr. JONES. Yes; 166 failures.

Senator PHIPPS. Out of what number of loans issued?

Mr. JONES. Out of 19,931 loans granted.

I presume, from reading the terms of their bill, that their settlement board uses considerable discretion—in fact, it is given discretion specifically in the concluding clause of their bill, to close out a settler if he demonstrates no ability or no interest in his work, or no sincere effort. In other words, they get what we call in the Army a "gold brick" once in a while, and they can arbitrarily close him out at any time.

But their figures also show, in that small number of failures, that the amount invested in these farms was $620,869, and the amount realized in resale of farm and equipment, $614,548, showing an average loss of $38 per farm.

Senator PHIPPS. They are watching them pretty closely, aren't they?

Mr. JONES. Yes. So their loss in that small number of failures was very small. They are checking up pretty close.

Senator KENDRICK. There might have been many good reasons why that many changes would occur, outside of failures.

Mr. JONES. I would say, without having a total report—and this is a preliminary report, as of November 30, 1920—that their settlement plan there had met with all the success that could be anticipated, particularly because the board has very general powers; they make a fairly large total of a loan, of $4,500, and they have very general powers as to the selection of lands and the loans on equipment and live stock.

Senator JONES of Washington. Does your report show what proportion of the lands taken by these soldiers was public lands, and what proportion was private lands purchased by the Government and then resold by the Government?

Mr. JONES. No; there is no showing of how much is private land and how much is public land. They take both sorts.

Senator KENDRICK. Mr. Jones, may I ask you a question there? Is it not your opinion that any plan of soldier settlement, in order to make it a success, necessarily will have to include some plan of loan

to enable the soldier to make a success of his settlement? Loans for the purpose of getting live stock and improvements on the land, similar to the Canadian idea?

Mr. JONES. Well, Senator, I have seen in the State of Washington, in the Yakima Valley, where I worked as a boy, settlers go in there with so little besides the clothes on their backs that it seemed very dubious whether they were going to have anything to eat for three months, but they have made good.

Senator KENDRICK. Isn't that a section that is unusually favored in the matter of climate and the character of the projects?

Mr. JONES. The first time I went through that section, Senator, it looked like the Sahara Desert. I went through that valley when I was 10 years old, and it was the dustiest sage-brush valley I have ever seen. It is known as particularly favored, because the settlement and the development of the valley started a good many years ago. That is the reason why it is particularly favored. It is now becoming a very prosperous area, a very prosperous valley, full of beautiful homes, beautiful roads, and beautiful improvements.

What the ex-service men would like, of course, would be a combination of a sensible land bill with either a cash bonus or a loan provision. They would like to have both, and undoubtedly will insist upon both to the extent of their means of insisting before the Congress, which is the reason that I have said that while telling your committee, from my experience with the ex-service men, that I believe that this measure which you have before you would be an immensely helpful measure, I would not presume to say that it would take the place in the minds of the ex-service men of any form of adjusted compensation they may be able to get.

There is a big sentiment among the ex-soldiers that any sort of a land bill should provide for a plan that an ex-soldier without a dollar should be able to get land and develop it.

Senator KENDRICK. That is the idea I had in mind in asking the question.

Mr. JONES. Now that certainly would allow some form of a bonus, would allow some form of a loan, in addition to the 60-day or the 90-day preference on the land. Whether a man who is so improvident that he can not save up a dollar will make good on the land, I could not tell, and, of course, there are a lot of ex-soldiers who are without a dollar to-day, without any special fault on their part, but as a result of their military service.

The disabled soldier or the partially disabled soldier is, however, in receipt of some compensation from the Government, or is entitled to it. If he is not in receipt of it it is because the operation of the compensation act has not been completely administered. The able-bodied soldier, like any other able-bodied citizen, at least has as good a chance to make good on a piece of irrigated land as he has a chance to make good anywhere else in this world.

Senator KENDRICK. A plan of that kind, it seems to me, should include an amortization plan, so that payment of a certain rate over a fixed period of years would cover the entire amount of the payment of both principal and interest.

Senator JONES of Washington. This bill gives the soldier a right to enter for a certain time, and then he is on the same basis as anybody else.

Senator PHIPPS. Now, on that point: What, in your judgment, would be the proper time to accord this preference right to the soldiers?

Mr. JONES. Under the present conditions, Mr. Senator, the 60-day preference would mean that every acre of usable land would be taken by soldiers. That was demonstrated in the Shoshone and in the North Platte projects, where there were many times more ex-soldiers who applied than there was available land. You are now talking about land that is not reclaimed yet, so by the time the project is completed the land is reclaimed, it is going to be sufficiently advertised so that there will be soldier applicants for all the land.

The CHAIRMAN. Six months is the time specified in this bill.

Mr. JONES. Yes; six months is the time specified in this bill.

The CHAIRMAN. You spoke about 60 days.

Mr. JONES. Yes, sir; the present law is 60 days.

The CHAIRMAN. Yes.

Senator JONES of Washington. Six months would be ample?

Mr. JONES. Yes.

Senator ODDIE. So the soldiers in the Eastern States would have as good an opportunity to get a chance at it as those in the Western States?

Mr. JONES. Well, the six months would be ample time; would afford the soldiers ample opportunity.

Senator PHIPPS. My object in asking the question was to find out whether six months is not too long a period. Would it have the effect of deferring the taking up of the land by others, perhaps, if the soldiers were allowed six months in which to apply?

Mr. JONES. Well, I don't think that the experience in any of the western reclamation projects has shown any difficulty with finding plenty of settlers for lands if there was plenty of water on that land. As I say, in that North Platte project and the Shoshone project there were 100 settlers ready, making their deposits, for every available farm, and I think that condition will prevail for at least a good while to come.

Senator KENDRICK. Isn't it also true, Senator Phipps, that in the majority of instances since these projects have been prepared and offered by the Government, there has been a clamor in advance of the time that the Government has announced the date for them to be thrown open? The Government has acted rather wisely, I believe, in most cases in deferring such date until they could have an assurance of water and everything else.

Mr. JONES. Well, gentlemen, from the first week that I was in the Army—and I was in the Army throughout the period of the World War, from almost the date we declared war—the only form of compensation, bonus, or other benefits that the average soldier in that Army talked about until after the close of hostilities, when the cash proposition was projected, was the discussion of land. I have heard that talk in the barracks in this country and in the huts in France, and in the barns and on the battle field and in the areas in the rear. It was the only thing that a soldier, that an American, thought of as the reward for a soldier. The conclusion that the average man of average intelligence in the Army reached was that the war-risk insurance act, as we then understood it, had eliminated the bonus idea.

Whether or not that is true I don't know, but that was the thought, that it was to supplant the bonus idea. That the only other reward for the soldier, who felt that he was losing money by his service, was that he was going to get land. The fellows from the eastern States had at that time the idea—and I talked to a great many of them; I can't tell you how many—that the great West was chuck full of fine land. Of course that was just a mistake. He thought that land was just available for the Government to make him a present of when he came out of the service. But that idea was very widespread. It was the thought of men who came out of eastern factories. I have had it from professional men who were in the service, lawyers, doctors, and so on, who wanted to come west, who had some money. And I have heard it from men of foreign birth, Italians and Greeks, and so on, who were in the foreign service, who came out of factories in the East, in Connecticut and Pennsylvania and other eastern States, and that was their one thought, that they were going to have a chance to own some land.

Now, it is true that that has departed from many minds, through the talk of the cash bonus and the long discussion over what might be the reward of the soldier, or whatever might be the adjusted compensation, but I don't think there is a question of a doubt that if land is made available by this bill or by some other bill from which men can make a living, there will be a hundred applicants for every farm for a number of years to come.

There will also be a continued demand for a bonus or a loan so as to make this land available to the man with the lowest initial capital or with no initial capital. If this bill alone were enacted the man with some initial capital would naturally have some advantage, and there will be bound to be some effort, through the soldier organizations, to get loans or bonuses to help the men without any available capital. But this law alone, with the 60-day preference, or the six-months preference, will produce just as many soldier settlers as there are farms, and many besides.

I would like to see the clause in there which provides for preference of employment on reclamation projects to ex-soldiers made more definite and specific if it could so be done.

The CHAIRMAN. To which section do you refer, Mr. Jones?

Mr. JONES. I haven't the bill before me.

Senator PHIPPS. Section 17.

Mr. JONES. There is a clause which provides merely in general terms that the ex-service men, the men who were formerly in the service in the World War and other wars, shall have preference of employment on reclamation projects.

The CHAIRMAN. Let me read this into the record, section 17, page 10 [reading]:

> In the construction of such projects as are authorized herein the Secretary, so far as practicable, shall utilize the services of ex-service men and women; and, as an aid to them, the Secretory may, in his discretion, prior to the completion of any project, throw open for their settlement any excess area therein.

Mr. JONES. If, either in the legislation or in the administration of it, some rules of the Secretary of the Interior might accomplish the same thing—and doubtless there would be such administration—that preference was made specific, so that former soldiers in Eastern States—those I have particularly in mind—who wanted land and

unfamiliar with the conditions on irrigated land in the West, but were energetic and reliable citizens, with an ambition to own land, could go West for employment on those projects for a period or a year or more, with the assurance of the employment, without having to go out there and take a chance of getting a job, I think you would find that a great many very ambitious, energetic young men would take advantage of it. That is what I had in mind, that it should be more specific.

The CHAIRMAN. The Secretary of the Interior, Mr. Jones, in the execution of this act could do so, if he thought it were practical.

Mr. JONES. I judge as it stands now he could do so. And as I say, it would be well if he did draw up some rules whereby the poor man, possibly through his soldier organization, through the post of some organization he belongs to, could be brought in contact with that employment.

The CHAIRMAN. Yes.

Senator PHIPPS. Well, really under this it is mandatory on the secretary.

The CHAIRMAN. Yes.

Senator GOODING. It says "shall," so that covers that point.

Mr. JONES. That would cover what the Canadian bill covers by its training section.

Senator GOODING. It doesn't say "he may," but it says "he shall," and that is strong language.

Mr. JONES. This provision in the Canadian bill has not been taken advantage of to any great extent, but the reason therefor is that the Canadian Government pays him——

Senator GOODING. I didn't catch that.

Mr. JONES. Under the Canadian bill it provides that a man who has no experience in farming, but wants to go into farming and take advantage of the Government land, can be placed in agricultural training, as they call it. The board places him with a farmer, sometimes places him for a month or two in a preliminary school, if he doesn't know anything about a farm, if he can not milk a cow or harness a horse or do anything useful on the farm; under those circumstances they give him a month or so of training, and they place him there, where he gets practical training, and he gets a certain rate of pay, and if he has a wife they give him more, and that is increased for each child that he has, but the pay has been so small and the wages that have been paid up until now, up until a few months ago, have been so good that very few men have availed themselves of this; very few men have taken this training. This preliminary report shows that only 916 men are in training under the supervision of the board, and that 1,414 have completed training.

Senator JONES of Washington. If you have no objection, I will suggest that you give that report to the stenographer for the record.

Mr. JONES. I will be glad to place it in the record.

The CHAIRMAN. It may be done.

(The tabloid statement of soldier settlement board operations (Ottawa, December, 1920), presented by Mr. Jones, is here printed in full, as follows:)

WAR TO PEACE—TABLOID STATEMENT OF SOLDIER SETTLEMENT BOARD OPERATIONS.

Summary of operations, Nov. 30, 1920.

Number of veterans in communication with board	100,000
Number applied for privileges of act	58,811
Number accepted as qualified to farm	41,906
Number qualified but not yet located	21,975
Number in training under supervision of board	916
Number completed training	1,444

LOANS.

Number granted loans	19,931
Amount of loans approved	$80,302,649

	Number of loans.	Amount.
P. E. I.	302	$814,957
N. S.	397	1,297,448
N. B.	511	1,463,692
Que.	455	1,894,384
Ont.	1,405	6,077,323
Man.	3,297	13,304,076
Sask.	4,893	19,947,706
Alta.	5,727	22,906,504
B. C.	2,944	12,596,649
	19,931	80,302,649

Amount of loans disbursed	$70,281,872
Initial payments on land purchased	$3,672,638
Number liable for repayments Nov. 1	12,507
Number who made repayments	[1] 7,470
Amount due	$2,334,174
Amount repaid	[2] $1,369,256
Number who have repaid loans in full	291

ADJUSTMENTS.

Number of failures and changes of ownership adjusted	166
Amount invested in these farms	$620,869
Amount realized in resale of farm and equipment (showing average loss of $38 per farm)	$614,548

AREA OF SOLDIER LANDS.

Area of new land broken (West only), acres	202,730
Area of land taken up by soldier settlers, acres	3,371,000
Saving in purchase of land (estimated)	$2,700,000

(This is based on exact figures from several districts.)

STOCK AND EQUIPMENT.

S. & E. purchased for soldier settlers	$22,619,759
Saving to settlers through special arrangements with dealers	$742,568

The CHAIRMAN. Is there anything further you desired to state, Mr. Jones?

Mr. JONES. I think not, Senator, unless there are some other questions.

The CHAIRMAN. Are there questions any members would like to ask Mr. Jones?

Mr. JONES. I do feel that it is immensely important—and I have worked on the matter more or less for the last two years—that the present desire, and the desire that has grown out of the war service

[1] Or 59.7 per cent.

[2] Or 58.7 per cent.

of young men, to take up lands, should have some outlet. There has got to be a weeding-out process, of course, in everything that is done, but there never was a better time to get ambitious, active, young men located on land if there is any land. As I interpret this bill it will make land available by putting water on it, and it will give preference to the ex-soldier. I don't think it should be confused with the bonus, or that it does anything further than that, but I think that this bill alone does more than any other bill has ever done. If the soldiers can get a bonus in addition to that, their opportunities will be so much further increased.

Senator GOODING. Mr. Chairman, wouldn't it be well to take up section 14, which has to do with the advantages given to the ex-soldier, and read it, and if Mr. Jones can give it his approval, why, I think the members of the committee will be very much pleased, and would like to see it strengthened.

The CHAIRMAN. Have you section 14 before you, Mr. Jones? Senator Gooding suggests you read that and see if you want in any way to amplify it or change it in any way.

Senator WALSH of Montana. Allow me to suggest that in view of what Mr. Jones has told you it might be advisable to change that word "less" in line 12 to "more," so that it shall read to provide for "a period of not more than six months before the general opening of the land," because, as it is suggested by a remark of Senator Phipps, of course you have people other than soldiers, and the taking of the land will be delayed just by the period during which the soldier is given the preference, and if Mr. Jones is correct that they will come forward speedily and would really actually absorb the whole thing, why, there is no reason for delaying the general opening.

Senator GOODING. I think I should object to the word "less" being cut out. The time, six months, might be reduced, but I think there should be a specific time.

Senator PITTMAN. Well, say, "not less than two months, nor more than six months." Giving the period.

Senator WALSH of Montana. I think that is all right.

Senator JONES of Washington. Do you think it is wise for us to decide that now?

Senator WALSH of Montana. Well, I throw out that suggestion.

Senator ODDIE. What method is employed in notifying the ex-soldiers throughout the country of the opening of land like this?

Mr. JONES. There is no method outside of the ordinary publication by the land office itself, except publications such as that with which I am connected. We make it our business to get the information from the land office for our reports.

Senator ODDIE. They might get it from that.

Mr. JONES. There is no particular method of notification, except that which covers any opening of public land.

Senator GOODING. I doubt whether it is necessary to put on any general advertising scheme, because I agree with you that at least all the more favorable projects that would be thrown open the service men are going to take up; there is no doubt about that in my mind at all, if the terms are such that they can meet them at all.

Mr. JONES. I am sorry that I haven't any data from the Australian and New Zealand land settlements, which I have seen, to present to you, but I couldn't put my hands on that data. I tried

to find it when I knew that I was going to talk to the committee. I did find this data on the Canadian situation, but my recollection is that in Australia and New Zealand the plan has been more successful than has the Canadian.

Senator PHIPPS. Could you procure that data on the New Zealand and Australian situation?

Mr. JONES. I am not certain, but I will try to. I made search for it yesterday and I intend to make further search, and if I can not find it I shall write for it, but it will be some time before I can get it, in that event.

Senator JONES of Washington. I suggest that if you find it you just make it a part of your statement here for the record.

Mr. JONES. I will be glad to do that.

Senator ODDIE. And wouldn't it be well, with that, to have a statement of the policy of Australia? Now, she has had a very much broader policy than most other countries prior to the war.

Senator JONES of Washington. I think Elwood Mead, if he were here, could give us full information on that.

The CHAIRMAN. Who is that?

Senator JONES of Washington. Elwood Mead; he used to be with the Department of Agriculture here, and then he was special commissioner over in Australia, dealing with that situation.

The CHAIRMAN. Do you know where he is?

Senator GOODING. In California.

The CHAIRMAN. Are there any further questions that any member of the committee wishes to put to Mr. Jones?

Senator GOODING. You feel that this section 14, Mr. Jones, is pretty liberal, don't you? Do you think that will meet the situation?

Mr. JONES. I am not a lawyer, sir, but I suppose that that is what it provides for, to give that definite preference.

Senator GOODING. You think that is very satisfactory?

Mr. JONES. In my judgment, it is.

Senator GOODING. It strikes me that it covers the situation.

Senator JONES of Washington. I am told that Elwood Mead has gotten out a book describing the conditions and situation in Australia.

Senator KENDRICK. I want to say, Mr. Chairman, that under the Australian plan, or rather that of New South Wales, they had many thousands of acres of land under water, everything ready for cultivation, and they were unable for years to induce people to occupy it or to procure a satisfactory settlement upon it, even after they did occupy it, and finally they initiated this system of governmental aid to the settlers, and the country has moved forward by leaps and bounds in its development ever since.

The CHAIRMAN. If there are no further questions, that will be all, Mr. Jones. We thank you very much.

We will now call Gov. Spry.

STATEMENT OF MR. WILLIAM SPRY, COMMISSIONER OF THE GENERAL LAND OFFICE.

The CHAIRMAN. Governor, will you state your full name and your present position?

Commissioner SPRY. William Spry; now Commissioner of the General Land Office.

The CHAIRMAN. Proceed, Governor.

Commissioner SPRY. Mr. Chairman and gentlemen, I have been requested to state briefly conditions as they relate to certain items here on the program that has been prepared for presentation to this committee.

The first statement relates to the attitude of the Government with relation to the public lands which have been allotted to the soldiers and sailors of past wars. The records, unfortunately, of the Land Department are not as elaborate on those questions as they should be, and I find by comparing a table that Mr. Blaine has just handed me that there is rather a wide difference.

The chief of division C, which handles the work of homestead entries, makes this statement: That from the years 1862 to 1920 there were, in round figures, 1,250,000 cases passed to patent by settlers who resided on the land for from five to three years. Out of that number there were probably 2 per cent of the cases in point that related to the soldiers of the Civil War, and the best estimate which they can arrive at is that a probable 25,000 Civil War veterans availed themselves of the various acts that have gone into effect since the year 1862. If you would double this estimate, of course we would have, probably, 50,000, but that hardly agrees with a memorandum here by Donaldson in his treatise on "The public domain."

On page 23 he states that the land grants under the general laws, to June 30, 1880, amounted to 61,028,430 acres. Now, as to whether that discrepancy can be accounted for by the fact that he has the total number of entries mixed with the entries which the soldiers availed themselves of I am not prepared to say, but he does state that in 1880, for that one year alone, there was a total in all the States of 9,152,357 acres of land, and he divides that acreage as follows:

In Alabama there were 350,000 acres; in Arizona, 17,000 acres; Arkansas, 391,000 acres; California, 367,000 acres; Colorado, 194,000 acres; Dakota, 2,268,000 acres; Florida, 95,000 acres; Idaho, 120,000 acres; Kansas, 1,509,000 acres; Minnesota, 854,000 acres; Washington, 421,000 acres; Uath, 97,000 acres; Oregon, 240,000 acres.

He has overlooked Nevada. I don't know whether Nevada had any lands entered in the year 1880 or not, but I imagine they did.

Unquestionably the soldiers of the country have availed themselves of what opportunities have been presented to obtain lands.

Senator PITTMAN. Mr. Governor, just before you pass that. I suggest the reason why he did not take up Nevada in that was because of the fact that prior to 1880 most of the land that was fit for homesteading had been acquired, and since that time other acts have been passed that land has been taken up under other than the homestead act.

Commissioner SPRY. I think that is quite right, Senator, quite right.

With relation to the attitude of the Government to-day concerning its soldiers and sailors of the late wars, more particularly, I was very much interested in what Mr. Jones has said, and from what he said, and from what my observation has taught me it has occurred to me that it would be very foolish for the Federal Government to undertake to locate the soldiers upon the land unless it is done in some organized way.

One of the chief difficulties in the Land Office to-day I find, in my short experience over there, consists in complaints coming in from returned soldiers, as well as others, to the effect that they are unable to make any kind of a start upon the land which they are now taking up. They lack the money. They lack water, and you gentlemen from the West—and you all are from the West—know that it is absolutely futile for anyone to undertake to locate upon the public domain in the West unless there is some visible water supply. It is a fact that every known water hole of the West has been taken possession of. There is no water available for irrigation except as that water is handled upon a large scale, and for only one man or a small body of soldiers to go upon the land and undertake to build a reservoir system for themselves, why it is practically impossible. These things must of necessity be done upon a very large scale. And where the boys can be located under those conditions, following the suggestions of you gentlemen that have already been made this morning, and that will be made, as to the care to be exercised on the part of the Government in seeing to it that they will make a proper start, it would seem to be worse than offering nothing at all, for the Federal Government to ask those boys to go out on the public domain.

Now, the fact is that there is not much of the public domain left for settlement; I mean now for the purpose of making homes. Grazing facilities are still, perhaps, quite plentiful, but for the young man to go out and undertake to wrest an attractive farm from the sagebrush desert to-day, without having the necessary funds and the necessary water, is a practical impossibility. It can not be done. So that what the Government does should be done in an organized form and with a supervision that will mean something of a practical character to the men who are going upon the land.

I have with me a circular, No. 712, that is issued by the Department of the Interior with relation to the vacant public lands that are available throughout the country in the various States up to July 1, 1920, and while this in the hands of a man without much experience would perhaps convey the impression that there are still many millions of acres of land that are yet suitable for settlement, as a matter of fact the fact which I have stated remains, that there are comparatively very few sections of the country where the settler can make a comfortable home without some organization that will bring some other men in with him and with money sufficient to create the necessary means of irrigation.

Senator GOODING. What is the number of this, Mr. Spry?

Commissioner SPRY. Circular No. 712. I will leave this with you, if you care to have it.

Senator GOODING. Yes; I wish you would. I would like to look at it.

Commissioner SPRY. Now, for instance, in the State of California there is to-day a total of 19,585,000 acres of public lands. That land is listed as mountainous, hilly, grazing, and mineral.

In Colorado, Senator Phipps's State, there is a total of 8,041,000 acres regarded as suitable for settlement. Now, as the Senator knows, there is much of that that is mineral, much more perhaps than is mountainous, then perhaps an amount of it that is good for grazing

and then some little of it that is good for settlement for agricultural purposes.

Senator PHIPPS. But a large area which is absolutely arid and which is being gradually reclaimed through intensive cultivation; that is, deep plowing, the dry-farming section, where the settlers have gone in and by sinking wells they get enough water for domestic purposes, including the watering of their cattle, but none for irrigation. Now, they have tried to rotate. They will plant a certain area one year and allow an adjoining section to, after deep plowing, remain fallow and cultivate it the following year. It has been demonstrated that they can scratch through if they have enough to carry them over a season or two, because on the average one good year's crop with a failure the following year, and maybe just a mere showing a third year, will still enable them to get along; and year by year they are learning how to handle this arid land and are making progress, so that the eastern section of Colorado, where this dry-farming area is found, is really developing, and it is really marvelous to see the character of the crops that they produce in a good year. For instance, if they get some snowfall during the wintertime and have planted to winter wheat, they can harvest perhaps early in June, or certainly well before the 1st of July, and get a good stand of grain that will produce 35 or more bushels per acre.

Commissioner SPRY. Yes, sir; that is quite true, Senator Phipps.

Senator PHIPPS. But that is not for the novice or the soldier boy or one who knows nothing about farming; it is not for him to undertake to go in and start on such land.

Commissioner SPRY. It will take a soldier boy some time to get used to a condition of that character. And then it isn't much use for anyone to attempt to locate even on those arid lands, unless they can be pretty well assured of at least 12 inches of precipitation during the year. They should have 15 or 16 inches of precipitation to assure a dry-farm crop.

Senator GOODING. And then it depends on the soil.

Commissioner SPRY. I beg your pardon, Senator?

Senator GOODING. I say, it depends also upon the character of the soil.

Commissioner SPRY. Yes; and also the preparation of the soil. Deep plowing conditions, as the Senator suggests, soil well pulverized, and top mulched creates more or less of an earthen reservoir for the precipitation as it falls.

Now, in Idaho we have, for instance, here listed 8,[illegible]05,000 acres as the total of land, both surveyed and unsurveyed, that is open for settlement. But, as Senator Gooding has already suggested——

Senator GOODING (interposing). Not a single piece of homestead land for any man to take up in my State; not one. I know the Commissioner of Labor Statistics made a thorough investigation of that and had to report that there wasn't a single homestead left anywhere which was safe for a homesteader to take up with the hope of making a living for his family. It is all gone.

Commissioner SPRY. There are so many people that are likely to get the idea of a homstead mixed with most any other kind of an entry. Men can locate, as Senator Kendrick knows, on certain grazing lands, perhaps land that will require five or six acres to support a sheep. I don't know how many acres you figure are sufficient to support cattle.

Senator KENDRICK. Twenty-five to thirty.

Commissioner SPRY. Yes. Now, a great many people are carried away by this vast area of western lands that are open for settlement to the soldier, and as, under the Senator's statement, it takes from 25 to 30 acres to support one animal, it is not much inducement for a soldier boy to put in one or two or three years of his life, or until such time as he gets disgusted and quits and goes out, cussing the Government because he has been induced to take up land of that character. It is unfair to the boys themselves to cause any such inducement as that to be held out.

In Senator Walsh's State we have a total of lands of that character of 5,973,000 acres.

In Nebraska we have about 60,000.

In Nevada we have more than pretty much any two or three States combined; a State total of 54,267,000 acres of land.

Senator PITTMAN. Now, let me state there that long ago all available homesteads in that State were taken. That the desert-land act proved an absolute failure, so far as that State was concerned, by reason of the requirements of that land act. That while there is a tremendous amount of arable land there—that is, rich soil which would be subject to cultivation if there was water—that we haven't any precipitation there with which to make a crop, because I think the average precipitation is only 8¼ inches within the year, and that takes in a great amount of snowfall in the high mountains, so that while we have got that tremendous amount of land, it depends entirely upon irrigation and the acquisition of a sufficient amount of water from some source, and it depends entirely upon additional legislation.

Commissioner SPRY. Yes.

Senator PHIPPS. I would like to ask the Senator from Nevada if it is not a fact that under the provision of the water power bill, with its administration in a broad-minded manner by the Government, water power would be developed to the extent that these arid lands or semiarid lands can be reclaimed by pumping the water to the surface electrically, as is done in California, your neighboring State.

Senator PITTMAN. I think that is true, Senator. I was successful in getting a bill through Congress here which applies only to the State of Nevada. It is a bill based somewhat upon the theory of the oil leasing bill, and that is, a citizen is allowed to take up four sections of land where there is no known supply of water for it, and he is allowed to prospect that during a reasonable period of time, either by artesian wells or a pumping system. There is no doubt but what the time is coming when there will be a tremendous amount of that land irrigated through pumping. That depends, of course, upon just what you have suggested, upon arriving at economy in power. We are trying it out now. In some places it will succeed.

Senator PHIPPS. And the removing of other restrictions from the development of your natural resources, and getting hydroelectric power, because this development has been held back, has been retarded on account of restrictions. Companies have been given no inducement to go in and develop the streams to produce hydroelectric power. The development along that line has been retarded. It is a fact that in California over 50 per cent of the hydroelectric power is used in pumping for irrigation.

Senator PITTMAN. Those questions, of course, depend upon the character of crop, its proximity to market, the expense of power. Those are the three main factors. And the experimentation under my act out there is getting us some very good data upon that subject.

Commissioner SPRY. Yes.

Senator PITTMAN. Another thing, too, without a reflection upon anyone, but it is a suggestion which I always like to make whenever I have an opportunity: Whenever it gets so that the regulations are not over twice as voluminous as the act itself, it will facilitate things greatly. I anticipate that under the governor's administration——

Commissioner SPRY (interposing). You mean under Secretary Fall's administration, Senator?

Senator PITTMAN. Well, or under the Land Department and under the Secretary of the Interior, I anticipate that the regulations will not be so voluminous as they are capable of being made.

Senator PHIPPS. This may be, perhaps, a little bit on the side, but this is intimately connected up with the possibilities of land development, and as we have before us an official who is going to be in a great measure charged with the responsibility of formulating the rules and regulations under which water power possibilities may be developed, I think it proper to call his attention to this very important thing of the pumping of water to the surface through hydroelectric energy. Personally, I have traveled over many miles of Nevada as well as Colorado, and in both States I know that the land is capable of cultivation; that it will produce almost any crop that can be produced anywhere in the West, and that all it lacks is the water to develop it. And water pumped to the surface through hydroelectric energy might be in many cases put on the land more economically than water can be reservoired to other territory that is now producing crops.

The CHAIRMAN. That is right. I am glad you brought that out, Senator Phipps, for the record.

Commissioner SPRY. There are two other States that are represented here, Mr. Chairman: Washington, which has 1,086,000 acres, and Wyoming, which has 19,679,000 acres.

Now, I merely mention this, gentlemen, so as to emphasize the fact, which I brought out just now, that in taking care of the soldier boys they must of necessity be taken care of in some organized form, and the best form that is presented before the people of the United States to-day is the form as adopted by the Reclamation Service. That is, of impounding the water, and so handling the land that it can be distributed equally among those who desire to go on it, and then have a general supervision until those boys become acquainted and know, as Mr. Jones suggested, just what to do with themselves as farmers.

Senator JONES of Washington. Governor, isn't it true that the Land Office and yourself do not know of any public land that you could recommend to a homesteader in its natural state?

Commissioner SPRY. That is quite true, Senator Jones.

Senator JONES of Washington. But the only way that land can be made available, that is really suitable for a homesteader, is through irrigation.

Commissioner SPRY. Yes, sir.

The CHAIRMAN. Now, Governor, you may proceed. You told me you were anxious to get away.

Commissioner SPRY. Yes; the Appropriations Committee wants me at 12.15.

Just one other remark in connection with that matter. And this is the very thing that has been the cause of so much criticism being directed against the Department of the Interior or the Land Office in particular. Men go out on their desert entries. They are required to put water upon certain portions of that land. The water isn't there, gentlemen, to put on. The result is that not conforming to the law, we are obliged to cancel their applications, and they go away feeling that the Government is not looking after them as properly as it ought to do. And that has given rise to a lot of undue criticism.

Now another question that was asked of me to answer is this, as to the amount of revenue that might be derived from the proceeds of the oil, gas and coal under the mineral leasing bill of February 25, 1920. Of course, that is a little difficult to answer, because of the fact that we are just now getting into that work, and incidentally, it is one of the biggest things, I think, that the land office is to-day doing, and we are more crowded on that perhaps than on any other work. Unfortunately we were not given any additional help to handle this tremendous job, and for that reason you gentlemen will understand sometimes why we are not able to give you service just as quickly as we would like to do.

There have been very few sales made up to date. There will be more, of course, during the remaining part of the year. But from the information which I can gather at the present time, we hope during the coming year to earn probably $3,000,000 from bonuses, royalty and sale of oil, gas, and coal. The proceeds from the purchase moneys from the sale of public lands will amount to probably a million and a half dollars. The proceeds from the sale of land and timber on the Oregon-California grant will probably be $250,000. And including the fees and collections in connection with the disposal of public lands the total will be about $6,250,000. I confess to you, gentlemen, that I think that is rather conservative, but I would rather make it conservative than to give you an exaggerated idea.

There are some men who have made more of a study, perhaps, than we have, that will estimate the earnings to that department at about probably $10,000,000, or some will probably go as high as $15,000,000. But I would rather put it at around from six to seven and a half million dollars, so as to make a conservative estimate. I say that in view of the fact that we made a sale recently over at Visalia, Calif., of four tracts of oil land, and netted in bonus alone $1,300,000.

Senator WALSH of Montana. How did you make those sales, Governor?

Commissioner Spry. The land was put up at public auction, Senator. The land was not sold, really, but men made a bid as to the bonus which they would be willing to pay for the use of that land, and in addition to that the royalty will be paid when the oil is discovered.

Senator WALSH of Montana. Under the oil leasing bill?

Commissioner SPRY. Under the oil leasing bill.

Senator WALSH of Montana. That is in the nature of a bonus, is it, Governor?

Commissioner SPRY. Yes.

Senator KENDRICK. That is territory which is known to be oil territory, is it not?

Commissioner SPRY. Yes; that is territory which is known to be oil territory, proven oil territory.

Senator GOODING. Oil on two sides of it?

Commissioner SPRY. Pardon me, Senator?

Senator GOODING. Land on which there is oil developed on two sides?

Commissioner SPRY. It is in a proven field.

Senator PITTMAN. A known oil territory.

Commissioner SPRY. Yes; a known oil territory. Now the royalty in that vicinity will be 33⅓ per cent, in addition to the bonus that was paid. Some of it brought as high as $2,800 an acre.

Senator KENDRICK. You are soon to have a sale in our State.

Commissioner SPRY. June the 15th, in the Salt Creek country. There will be 6,000 acres sold at that time. It is being pretty widely advertised, and in order to induce the buyers to come we have arranged to cut the offered price into five payments, the down payment of 20 per cent, and granting a year to pay the balance, properly secured, of course, so that, in view of the stringency of the money market men who really want to do the real thing might have an opportunity to develop it.

Senator KENDRICK. It would be of interest to the committee to have this information, Governor. Is that on the Salt Creek Dome?

Commissioner SPRY. Yes.

Senator KENDRICK. That ought to bring several million dollars.

Commissioner SPRY. We are hoping that it will bring a satisfactory figure, Senator.

Senator KENDRICK. Yes, I believe it will.

Commissioner SPRY. Of course we can not tell. Money is tight now, and some have advised that we should postpone the sale on that account, but there are men who are already obtaining oil in that field, and we don't want to exhaust the supply. We want to give the fellow who wants to go in there an opportunity to break even himself.

Senator PITTMAN. I have forgotten the percentage the reclamation fund gets; 55 or 60 per cent?

Commissioner SPRY. Fifty-seven and one-half.

Senator PITTMAN. I did not remember the exact figures. I knew we reached a compromise.

Commissioner SPRY. I think it is 57½ per cent, Senator, for the reclamation fund.

Senator PHIPPS. Does your figure of $3,000,000, received from oil, gas, and coal, include the money that was impounded?

Commissioner SPRY. No, Senator, that does not include the money that was impounded.

Senator PHIPPS. There is quite an accumulation of money there now, is there not?

Commissioner SPRY. There is probably impounded to-day $7,000,000 in various Federal Reserve Banks of the country.

Senator PHIPPS. Well, now, how soon is that going to be adjudicated?

Commissioner SPRY. As soon as I went into office an order was made providing that a monthly report should be made in the future, and that all funds that are now in the Federal Reserve Banks, shall be forwarded to the Treasury of the United States, so that we ought to get that amount in within the next 30 days, and then monthly reports made from then on.

Senator PHIPPS. What percentage of that $15,000,000 that would go to the reclamation fund is it—57½?

Commissioner SPRY. Fifty-seven and one-half.

The CHAIRMAN. In the discussion of this bill by those having in charge the preparation of it, it became usual to speak of the annual accretion as $8,000,000.

Commissioner SPRY. Yes.

The CHAIRMAN. I think that figure is accepted by all of us.

Commissioner SPRY. I think that is a very fair statement, but I got my figures from Mr. Bullion, whose name evidently is a very appropriate one, in handling the funds that come into his office. He made that statement, that he thought probably it would reach $6,250,000, but insisted that it was a conservative estimate. I think that eight millions will be more nearly right.

Now, with regard to the provisions of the bill as to the town sites that are provided for, and the advantages from community settlements, I presume there is none of us who has lived in the West but what has seen the advantages of the community life as compared with the situation that we find in the mid-West States, for instance. The tendency is to flock together in the community, where your schoolhouses can be built and where your churches can be built, and where your banks and your business institutions can be taken care of. The social life under those conditions becomes very much more desirable, particularly to the young men and the young women. They can meet together more frequently. They have their libraries which they can attend. They have their social functions. And because of that it is making the conditions of farm life so much more attractive and agreeable to the young men and the young women than it has been heretofore, where they have been separated from each other by 160 acres of land, and where it has been more difficult for them to get together and participate in that community life.

Now, I think your bill, which we have been discussing here to-day, will largely solve a condition of that kind, and make the life of the man that you want to put on the soil and the woman that you want to put on the soil much more desirable, so that, instead of repelling, as it has done heretofore, it will attract the settler, and the farm will be, among other things, a most desirable place to live.

I have always contended this, that the farmer of the country to-day, regardless of the low prices that he is receiving for his crop, is really the most independent fellow we have in the United States. There is just this difference between him and the city man. The city man may be handling cash for labor performed, but if you notice, he has to expend his cash for the very thing that the farmer himself is producing from the land, and the farmer can get it in much better shape than the city man can buy it from the store. It is fresh and wholesome, and in addition to that he has the satisfaction of knowing that he himself is the producer of the things that enter into his life as do the products of the farm. And while it is true that under present conditions the inducements to go upon the farm are not, on account of the low prices of the product of the farm, all that they might be, yet those conditions are passing. We have had similar conditions before. And there is no question at all but what these conditions

will improve. And in putting these young men, these soldier boys that Mr. Jones has been speaking of upon the soil, it occurs to me that by putting a class of men of that character upon the soil you will have as fine a citizenship and as progressive a citizenship and as loyal a citizenship among those boys as you have ever been able to find in the history of the country. And I am very strong for the provisions such as Mr. Jones spoke of.

I am strong for the help that goes to the boy that has defended his country, and if you can put him in this community settlement and give him the advantages thereof, there is no question at all but what he will be contented with his lot, and become all that it is desired to make of him.

I don't know whether there are any further questions that you care to ask me.

The CHAIRMAN. Let me ask you, Governor, what is your opinion with respect to the provisions of this bill and the policy that it attempts to create?

Commissioner SPRY. Why, personally I am very much in favor of the provisions of the bill, Senator. Those provisions have been prepared after very much thought and deliberation, and to my mind it is the best reclamation bill that has ever been drawn. It establishes reclamation for all time to come. It has no limit. It is perpetual in its character. The fund becomes a revolving fund with the years, and with each sale of bonds the fund is replenished. I think Judge King figured it out at one time and insisted that this fund, this appropriation that the bill is asking for at the present time, will, within 20 years do probably $2,000,000,000 worth of constructive work. Or, in other words, take under its provisions approximately 20,000,000 acres of land.

Senator WALSH of Montana. Mr. Governor, what suggestion would you have to make to meet the suggestion in the letter of the Secretary of the Treasury that we should not take up new projects, and his criticism also of revolving funds?

Commissioner SPRY. I would offer this suggestion with relation to that. The needs of the country to-day in caring for the unemployed men requires new projects. The fact that you are obtaining this money from the oil-leasing bill, providing a fund which will obviate the placing of further burdens upon the Federal Government—there will be no necessity for any future direct appropriation. You don't attack the funds of the Federal Government whatsoever; it is a fund that is generously flowing into the Treasury and from the Treasury to the Reclamation Service—that personally I don't see that those objections are well founded.

Senator JONES of Washington. Well, Governor, this provision for $250,000,000—do you mean to give us to understand that that will be made by the moneys coming in?

Commissioner SPRY. No, sir.

Senator JONES of Washington. Well, then, we have to make that appropriation.

Commissioner SPRY. You have to make that appropriation; yes, sir; that is true.

Senator JONES of Washington. Well, that is what I had in mind when I asked you that question.

Commissioner SPRY. I misunderstood you, then, Senator. I think myself, that in view of the tremendous amount of money that has been and is now being appropriated for various other purposes, that this is one of the best investments that the Federal Government can make, to invest $250,000,000 in the interest of the ex-service men and in the interest of the citizenry of the country in this way.

Senator GOODING. That is merely a loan.

Commissioner SPRY. That is merely a loan that is paid back with a fair rate of interest.

Senator JONES of Washington. I think it would be helpful to the entire committee if the governor can come back.

The CHAIRMAN. We will meet again some time next week, and would be glad if the governor would come before the committee at that time.

Commissioner SPRY. I will be glad to. I am sorry I can not stay longer.

The CHAIRMAN. Well, we thank you very much, Governor.

STATEMENT OF MR. HUGH A. BROWN, SENIOR CLERK, RECLAMATION SERVICE.

The CHAIRMAN. Will you state your name and your position, Mr. Brown.

Mr. BROWN. Hugh A. Brown. Senior clerk and editor of the Reclamation Service.

I have been asked to appear before the committee and testify briefly concerning the number and the character of the inquiries that have been received from ex-service men concerning the opportunities of the land. Perhaps I might briefly refer to the activities of the Interior Department that led up to the interest, that Mr. Jones has spoken about, of the service men in securing opportunities on the land.

As you remember, in 1918 the Secretary of the Interior sent a letter to the President, copies of which were sent to the Members of Congress, concerning his plan for soldier settlement. Following that, in the fiscal year 1919, the Congress appropriated $100,000 for an investigation of the possibilities of soldier settlements in the various States, and succeeding that, the Secretary prepared and sent out to the various camps, to the Y. M. C. A.'s, the Knights of Columbus huts, and various other organizations which were directly interested in the welfare of the soldiers, copies of this little booklet entitled "Hey, There! Do you want a home on the farm?" which was a brief description of the soldier settlement plan as evolved by the Department of the Interior, and contained on the back of it a post card that could be filled out by the soldier indicating whether he was interested in the plan, and then torn off and sent back to the department. In addition to that the Secretary also prepared this further pamphlet "Work and homes for our fighting men," which contains briefly extracts from his annual report discussing the returning soldier, and the opportunities for soldier settlements, and a number of letters he included in here from ex-service men, stating what they thought about the plan, and then a table of the soldier-settlement plans in foreign countries.

As the result of the $100,000 appropriation the department made a preliminary reconnaissance of the opportunities in the several States for the soldier settlement projects, and that report is included in this publication here, entitled "The development of unused lands."

Senator PITTMAN. What number is that?

Mr. BROWN. House Document 262 of the Sixty-sixth Congress, first session.

As the result of these investigations and the sending out of these various pamphlets, of which the department printed, I believe, about 900,000 of this small pamphlet and perhaps 50,000 of this large one, "Work and Homes," we got a large number of inquiries from the soldiers as to the possibilities on the land. Up to the present time, or up to April 30, 1921, the department has received 119,000 of these questionnaire cards, as we call them, sent in by the soldiers, and 65,000 letters. These I have subdivided here approximately by States, showing the number of letters and the number of cards that have been received, roughly, from each State.

Senator WALSH of Montana. I think, Mr. Chairman, that tabulation should go in the record, but perhaps the documents that are already public documents should not be placed in the record.

The CHAIRMAN. Very well; it may go in the record.

(The tabulation presented by Mr. Brown is here printed in full, as follows:)

Approximate number of inquiries from ex-service men concerning opportunities on the land, received to May 1, 1921.

	Letters.	Cards.
Alabama	500	2,000
Arizona	440	300
Arkansas	1,600	2,000
California	3,280	9,100
Colorado	1,220	3,000
Connecticut	380	300
Delaware	80	100
Florida	480	1,000
Georgia	680	2,000
Idaho	320	2,000
Illinois	6,600	12,000
Indiana	2,540	5,000
Iowa	3,440	5,500
Kansas	2,720	4,000
Kentucky	1,080	3,000
Louisiana	620	2,000
Maine	180	300
Maryland	400	500
Massachusetts	880	2,000
Michigan	1,760	4,000
Minnesota	1,320	4,000
Mississippi	620	1,000
Missouri	4,100	6,400
Montana	640	2,000
Nebraska	3,160	2,000
Nevada	100	200
New Hampshire	120	100
New Jersey	1,200	1,000
New Mexico	360	400
New York	3,780	6,000
North Carolina	560	800
North Dakota	300	700
Ohio	2,780	4,000
Oklahoma	2,220	3,000
Oregon	520	3,000
Pennsylvania	2,680	6,000
Rhode Island	200	200
South Carolina	280	300
South Dakota	880	1,500
Tennessee	800	1,000
Texas	3,480	6,000
Utah	240	400
Vermont	120	200
Virginia	1,080	1,500
Washington	1,080	2,000
West Virginia	640	700
Wisconsin	1,640	4,000
Wyoming	480	300
District of Columbia	440	200
Total	65,000	119,000

Mr. BROWN. I might say that a tabulation was made of a thousand of these soldier-settlement questionnaire cards that were returned by the soldiers on the basis of the various questions that were asked on there. They are listed:

Name in full ———. Home address ———. How old are you? ——— What was your occupation before you enlisted? ———. Have you ever worked on a farm? ———. Are you interested in this plan to provide work and a farm for you? ——— What kind of farming do you wish to follow? State whether general, live stock, truck or fruit. ——— Would you be willing to take a job on some project, if offered to you, in your own State or anywhere in the United States? ———.

As the result of that tabulation of a thousand of those inquiries, we found that 44.2 per cent of the men were engaged in farming at the time of enlistment.

We found that 88.3 were either so engaged or had had previous experience in farming.

And of those who were engaged in some other occupation than farming at the time of enlistment, 80 per cent had had previous experience in farming.

Fifty-eight per cent of the men chose general farming; 27.6 per cent chose live stock; 7.2 per cent chose truck farming; 7.2 per cent chose fruit farming.

As to locality, 47.5 per cent stated that they would work in their own States or in some State specifically named.

Fifty-two and five-tenths per cent stated that they would work anywhere in the United States.

Those figures related entirely to a thousand of these questionnaire cards.

The letters that we are receiving now come practically entirely from the Land Office. We have received very few letters recently, within the last few months, from ex-service men, inquiring specifically about soldier settlement legislation. The general trend of the letters is inquiring about general legislation in regard to homesteads.

Here is one letter that I might read, from a man in Illinois [reading]:

I am an ex-soldier, having served overseas with the One hundred and eighth Sanitary Train. I am interested in taking up a homestead. Please send me circulars and other information regarding same. If not, please tell me where I may get such information.

Senator KENDRICK. Did I understand you to say that 88.2 per cent of the soldiers enlisted or drafted during the war had either come from the farm, or had previous experience on the farm?

Mr. BROWN. Yes, sir. That was as the result of the tabulation of just 1,000 of these inquiries.

Senator GOODING. That is, there was that percentage of those that answered, as I understand.

The CHAIRMAN. They picked out 1,000 cards, and of that number 88 per cent had had previous farm experience.

Mr. BROWN. We simply took out a thousand cards from the 100,000 that we received, and out of that number 88 per cent showed that they had had previous experience on the farm.

The CHAIRMAN. Out of the 1,000 cards that were taken out?

Mr. BROWN. Yes.

Senator PHIPPS. Mr. Brown, do I understand you to leave this impression, that the soldiers show more land hunger now and more of a desire to go to the farm than they did a year ago?

Mr. BROWN. That they are more desirous of going on the farm than they were a year ago?

The CHAIRMAN. Yes; that is the question.

Mr. BROWN. No, not on the basis of the number of letters we are receiving, Senator.

The CHAIRMAN. But as to the character of the letters that you are receiving. Do they indicate a desire on the part of a great many soldiers to go on the homesteads, back to the farm?

Mr. BROWN. At the present time we are receiving 50 letters a day. At the height of the campaign, that is when the department was sending out these questionnaire cards, and the men were going to the camps and talking to the soldiers, and when there was a good deal of newspaper comment on the question about the provisions to be made for the soldiers, there were 5,000 letters a day coming in. But for the past eight months the average has been 50 letters a day. Most of those are coming to us from the Land Office. We have an arrangement with the Land Office by which they send to us all letters from ex-service men requesting information concerning opportunities on the land. We did that, because up to a short time ago, in addition to the literature sent to the soldiers, we sent to them a circular letter which briefly told them that soldier settlement legislation had been introduced in Congress, but that so far nothing had been done in the way of final action, and that we could not tell them what action Congress would take. That was about the way the letters read.

The CHAIRMAN. Have you any other letters similar to the letter from the ex-soldier from Illinois?

Mr. BROWN. Yes, sir. Here is one from an Oklahoma soldier [reading]:

Please give me full information in regard to Government land located in New Mexico for ex-service men. I was honorably discharged from the United States Army,

and so forth.

Here is one from California [reading]:

Please send me information on homestead lands, if there are any. Prefer land in Montana. I may not have much money, but I have plenty of ambition, and have had some experience in farming.

This is another letter from Illinois [reading]:

I am an ex-soldier, and I am thinking of taking up a claim some time in the spring.

This is written January 4, 1920:

I hope you can furnish me information on where this land is located, and what kind it is.

Here is one from Indiana [reading]:

Where is the land in the States located that can be homesteaded? I would like to take out a claim in one of the Western States. If there are any lands for consideration I would appreciate being informed.

And here is one from Colorado [reading]:

Would you please send to the above address some pamphlets covering Government lands that are open for homesteading, preferably in Colorado or California?

Here is one from a man in Missouri [reading]:

With regard to land that remains for homesteaders in Washington, Oregon, Idaho, Colorado, and New Mexico, please give me what information that I may obtain as to

what part of the following States that the above land may be found in, and the rights that a soldier can obtain.

A man from Wisconsin writes this [reading]:

Would you please advise me whether the Government has decided to grant land tracts to former service men?

In that connection I might say that up to perhaps the last year or so, or while this campaign was at its height, a great many of the soldiers apparently believed that the land was to be simply handed to them by the Government. Not so many of those letters are coming in now. We used to get a good many letters like this:

How about the free land that the Government is going to give to the ex-soldiers?

But I don't notice that that character of letters are coming in so freely now as they did before.

Here is one from Kansas [reading]:

I am interested in homestead land and would appreciate it very much if you would furnish me with information regarding this land in Wyoming and Montana. What requirements are made when a claim is filed?

Senator GOODING. Let me ask you what your reply is to a man that has written in inquiring about a homestead? What do you say to him? What are you able to say?

Mr. BROWN. As I say, all of these letters have come to us from the Land Office, and they have furnished them with such information as they have.

Senator GOODING. You don't reply?

Mr. BROWN. No.

Senator GOODING. If you were going to make a reply to a man who was asking about a homestead, what could you say?

Mr. BROWN. We couldn't say anything, because we understand there is practically no strictly homestead left.

Senator GOODING. Yes; there is no doubt about that.

Mr. BROWN. Shall I continue reading these letters, Senator, or leave them here for the committee?

The CHAIRMAN. I think that is sufficient.

Mr. BROWN. That is about the character of letters that we have here. They are all about along the same line.

The CHAIRMAN. Well, that is all right; we have a general idea of them from the letters that you read.

Senator GOODING. I think it is very important, Mr. Chairman, that it be understood—although you have got that pretty well in the record, however—that there isn't any homestead land left; that it is no longer a new country. And that that is the strength, to my mind, of this matter of reclamation.

The CHAIRMAN. So many people take it that homestead lands means the public lands.

Mr. BROWN. Mr. Jones spoke about the North Platte opening. At that time we received at the Washington office about 10,000 letters from ex-service men who inquired about that opening. A similar number were received in our office at Mitchell, Nebr. And of those 20,000, as Mr. Jones has stated, over 3,200 actually made application for these 80 farms in the North Platte opening.

The CHAIRMAN. How many farms?

Mr. BROWN. Eighty farms, in the North Platte opening, on March 5, 1920.

The CHAIRMAN. Do you recall the opening of the Oregon lands and the conditions?

Mr. BROWN. No, sir; that was entirely under the Land Office. That was the Oregon Railroad land grant.

The CHAIRMAN. I remember a statement that there were many thousand more replies than units of land available.

Have you anything further?

Mr. BROWN. Nothing further, Mr. Chairman, except to say that following that opening on the North Platte we had a similar opening on Shoshone. That there, apparently, the men were a little bit discouraged over the fact that so many had failed in their application from the North Platte project, and at the opening following, on the 13th of March, on the Shoshone project, where we had 50 farms available, we had, I believe, some 500 applicants for the land. So it practically dropped from 40 to a farm down to 10 to a farm. But that, we considered, was due to the discouragement on the part of the men that went to the North Platte project and failed to get land.

Senator KENDRICK. I have in mind the disappointment that came to so many men owing to their failure to secure land, in asking you this question: Do you not believe it is possible for this department to give out this information to the ex-service men in reference to the opening, and to secure and accept their application in a perfectly satisfactory and legitimate way without involving the applicant in a lot of unnecessary expense?

Mr. BROWN. I presume some such arrangement could be worked out, Senator.

Senator KENDRICK. That was not done, however, in that particular opening to which you refer?

Mr. BROWN. No, sir. There were about 3,200 men who actually went to North Platte for 80 farms.

Senator KENDRICK. And, as was indicated here, a great deal of money was advanced.

Mr. BROWN. Yes; about $1,200,000 was actually put up by these men.

The CHAIRMAN. Have you concluded, Mr. Brown?

Mr. BROWN. Yes.

The CHAIRMAN. Thank you very kindly.

I want to recall Mr. Blaine for the purpose of explaining the table which I shall hand to him.

STATEMENT OF MR. E. F. BLAINE, SEATTLE, WASH., REPRESENTING THE WESTERN STATES RECLAMATION ASSOCIATION—Resumed.

Mr. BLAINE. This table referred to by Gov. Spry is taken from a book in the Public Library over here, entitled "The public domain," by Donaldson, and it shows, as he already stated, that down to June 30, 1880, there had been allotted to the soldiers and sailors of past wars out of the public domain a total of 61,028,430 acres.

In this book, at page 23, he gives the amount of land that was sold in the year 1880—not to soldiers, but the total amount of public domain disposed of at that time. The total in all the States was 9,152,357 acres. I didn't write down here all the States in which

land was sold, although the list contained all the States, but I took down several of the States, and I want to call particular attention that out in the State of Washington, where in 1880 we didn't have a single railroad across the State, way across the State, that a total of 421,000 acres of public domain was disposed of, in that State. And in Oregon, where they had one road, I believe, up and down the State, and another coming down along the river, a total of 240,000 acres was sold. In other words, it shows that way back in 1880, when our population was much less than what it is to-day, and our wealth much less, railroad communication much less than at the present hour, that a total of 9,000,000 acres of land was sold in one year.

Senator ODDIE. What proportion of that was land that did not have to be irrigated, in sections where they had rainfall?

Mr. BLAINE. Well, practically all of this was arable land, Senator.

Senator ODDIE. Where they had rainfall?

Mr. BLAINE. Oh, yes; where they had rainfall; yes.

Senator PITTMAN. You say practically all of that was arid land?

Mr. BLAINE. Arable.

Senator PITTMAN. Wasn't most of it timber land?

Mr. BLAINE. Oh, no.

Senator PITTMAN. You are not including the timber land at all?

Mr. BLAINE. No.

Down in Kansas they sold 1,509,000 acres, and in Dakota it was 2,268,000 acres.

Senator PITTMAN. Well, I mean, is this a tabulation of arid land, or all lands?

Mr. BLAINE. No; I am just showing you the land that was disposed of by the Federal Government, to show how rapidly land has been absorbed in the United States, and for several years now there has been no public land opened for sale, so it is probable there is a very strong demand at the present time for additional new lands.

The CHAIRMAN. Have you anything further to say, Mr. Blaine?

Mr. BLAINE. No, sir; that is all, Mr. Chairman.

The CHAIRMAN. Thank you.

I wish to place in the record a letter from the Spokane Chamber of Commerce containing a resolution adopted by the reclamation and land settlement committee of the Spokane Chamber of Commerce.

(The letter presented for the record by the chairman, is here printed in full, as follows:)

SPOKANE CHAMBER OF COMMERCE,
Spokane, Wash., April 29, 1921.

Hon. CHARLES L. MCNARY,
United States Senate, Washington, D. C.

DEAR SENATOR MCNARY: I am instructed to communicate to you the following resolution, which was adopted at a meeting of the reclamation and land settlement committee of the Spokane Chamber of Commerce yesterday:

"*Resolved*, That the reclamation and land settlement committee of the Spokane Chamber of Commerce, after thorough study and consideration, unanimously approves the Smith-McNary bill for the reclamation of the arid lands of the West. They believe that this bill marks a milestone in the history of western reclamation.

"*Resolved further*, That the secretary be instructed to communicate to those instrumental in the framing of the bill the sincere appreciation of the Spokane Chamber of Commerce for the vision and wisdom they have shown in perfecting such a broad and comprehensive measure for the reclamation of the West and to offer them our fullest cooperation in every way."

I assure you that Spokane is deeply interested in the success of the reclamation bill, and hope you will not fail to call upon us if we can cooperate in any way.

Sincerely, yours,

ALAN G. PAINE, *Acting Secretary.*

The CHAIRMAN. This will conclude the hearing to-day, and some day next week we will have a further hearing, at which time we will hear from Secretary Fall and Mr. Bien of the Reclamation Service.

(Thereupon, at 12.30 o'clock p. m., May 6, 1921, the meeting adjourned, subject to the call of the chairman.)

COOPERATIVE RECLAMATION ACT.

SATURDAY, MAY 21, 1921.

UNITED STATES SENATE,
COMMITTEE ON IRRIGATION AND RECLAMATION,
Washington, D. C.

The committee met, pursuant to call of the chairman, at 10.30 o'clock a. m., in the committee room, Capitol, Senator Charles L. McNary presiding.

Present: Senators McNary (chairman), Jones, Phipps, Gooding, Cameron, Oddie, Kendrick, and Sheppard.

The CHAIRMAN. The committee will come to order. This meeting of the committee was called to get the views of the Western States Reclamation Association represented by the governors of several Western States who are here. The president of this association, Gov. Davis, of Idaho, will be heard first.

STATEMENT OF HON. D. W. DAVIS, GOVERNOR OF THE STATE OF IDAHO, AND PRESIDENT OF THE WESTERN STATES RECLAMATION ASSOCIATION.

The CHAIRMAN. Gov. Davis, please give your name to the reporter, and state your connection with the Western States Reclamation Association.

Gov. DAVIS. My name is D. W. Davis; I am governor of the State of Idaho, and president of the Western States Reclamation Association.

The CHAIRMAN. Gov. Davis, we are considering Senate bill 536, and as governor of your State and president of the Western States Reclamation Association I would like to have you make such statement as you desire with reference to the bill under consideration.

Gov. DAVIS. Mr. Chairman and members of the committee, the governors of the Western States, as many as could attend, convened at Denver on the 10th and 11th of this month for the purpose of discussing reclamation in general, and what course we could pursue to be of the greatest assistance to Congress in the passage of a reclamation bill. At that meeting, in attendance, were Gov. Thomas E. Campbell, of Arizona; Gov. Oliver H. Shoup, of Colorado; Gov. Louis F. Hart, of Washington; Gov. Chas. R. Mabey, of Utah; Gov. Emmet D. Boyle, of Nevada; Mr. Frank C. Emerson, representing Gov. Robert D. Carey, of Wyoming; Mr. Robert H. Willis, representing Gov. S. R. McKelvie, of Nebraska; Mr. William Hanley, representing Gov. Ben W. Olcott, of Oregon; Mr. W. F. McClure, representing Gov. William D. Stephens, of California, and myself, representing Idaho.

After considerable discussion of the various bills before Congress, the committee passed a resolution indorsing the McNary-Smith bill, believing that the plan outlined in this bill met the requirements and conditions of the West better, perhaps, than any other bill that had been called to our attention.

We came on to Washington—the governors of five States—Arizona, Nevada, Utah, Idaho, and Washington; and Colorado, New Mexico, Wyoming, Oregon, and California being represented by the following: Mr. Delph Carpenter representing the governor of Colorado; Mr. Brimmer, representing the governor of Wyoming; Mr. Dodson, representing the governor of Oregon; Mr. Stephen B. Davis, representing the governor of Wyoming; and there are also here Mr. Sims Ely, secretary of the Arizona Resources Board, and Mr. Frank W. Brown, secretary of the Western States Reclamation Association.

As you gentlemen know, the Western States met in Salt Lake City and organized this Western States Reclamation Association for the purpose of promoting reclamation in the West in a general way. We are not here in the interest of any one individual project; we are here in the interest of reclamation as a whole, and we are in great hopes that this Congress will adopt some policy of reclamation that will go on and which can be continued, so that the efforts of the past for individual projects will be eliminated.

I do not feel that it is necessary for us to discuss the merits of irrigation to this committee. That has been done, and it would take considerable time, and unless you desire it we will not discuss the merits of irrigation at this time. You have all heard from those of us who are present now from the West on this subject.

A year ago we went into it at some length, and no doubt you want to be spared the time of listening to argument favoring reclamation at this time.

And we are here, gentlemen, to aid you in any way that we possibly can. We have had a conference with Secretary Fall of the Interior Department, a very satisfactory meeting with the Secretary. He is lending every assistance possible to bring about a permanent policy of reclamation. We were received by the President and had a very satisfactory conference with the President. Your chairman, Senator McNary, accompanied us at that time; Secretary Fall accompanied us, and also the Commissioner of the General Land Office, Gov. Spry. We feel that the hearing was indeed satisfactory. The chairman can report more in detail, perhaps, on that.

And now if there are any questions any member of the committee would like to ask us, we would be glad, indeed, to answer.

The CHAIRMAN. Let me ask you about the body of this bill; its contents and provisions, are they satisfactory to the Western States Reclamation Association, or have you any amendments or omissions to suggest that you think might better the bill?

Gov. DAVIS. We have not discussed amendments at any great length. We have felt that the bill as now drawn is intended to cover perpetual reclamation in a very able manner, and we did not feel that we should discuss the real minute details with the view of changing or amending the bill, leaving that to you men who are making a close study of the subject.

But we are very much impressed with the provision of the bill that makes this a sort of revolving fund, and it is workable, we believe, and would be found satisfactory in its workings. The appropriation of a flat sum of money for reclamation would not get very far; unless it can be put into a sort of revolving fund you would not get a great ways in general reclamation. We believe it is perfectly feasible that the Federal land bank and Federal farm-loan board can handle this as it is contemplated in this bill. And we are very much in hopes that some such provision will prevail in the final passage of the bill.

Is there any question, Senator?

Senator GOODING. I want to know if the governors generally have considered this bill and found it satisfactory. Do you give this bill your approval?

Gov. DAVIS. Yes, sir.

Senator GOODING. As individuals and as governors of the different States.

Gov. DAVIS. Senator Gooding, we adopted a resolution indorsing the McNary-Smith bill, and a copy of the resolution will be furnished for the record.

The CHAIRMAN. I have a copy of the resolution here, which I will ask the reporter to insert in the record.

(The resolution referred to is here printed in full, as follows:)

RESOLUTION ADOPTED AT CONFERENCE OF GOVERNORS REPRESENTING THE STATES CONSTITUTING THE WESTERN STATES RECLAMATION ASSOCIATION.

Be it resolved by the governors of the States of the Western States Reclamation Association, in conference assembled at Denver, Colo., this 11th day of May, 1921, That the principles expressed in the bills now pending before Congress and introduced in the House of Representatives by Mr. Smith of Idaho and in the Senate by Mr. McNary of Oregon, providing for the appropriation of $250,000,000 for reclamation purposes, have the approval of this conference, and the governors here assembled recommend favorable consideration of said measures by Congress.

THOMAS E. CAMPBELL,
Governor of Arizona.
WILLIAM D. STEPHENS,
Governor of California.
By M. MCCLURE,
State Engineer.
OLIVER H. SHOUP,
Governor of Colorado.
D. W. DAVIS,
Governor of Idaho.
EMMET D. BOYLE,
Governor of Nevada.
MERRITT C. MECHEM,
Governor of New Mexico.
BEN W. OLCOTT,
Governor of Oregon.
By WILLIAM HANLEY.
CHARLES R. MABEY,
Governor of Utah.
S. R. MCKELVIE,
Governor of Nebraska.
By ROBERT H. WILLIS.
ROBERT D. CAREY,
Governor of Wyoming.
By FRANK C. EMERSON.
LOUIS F. HART,
Governor of Washington.

Senator KENDRICK. I want to ask the governor if he believes that the plan under which the project is to be initiated would be workable in sections of the country where there is limited settlement; there are territories, for instance, in the West, particularly in my State, where there are no settlements whatever, and yet great tracts of land could be reclaimed if there was any way of initiating the program?

Gov. DAVIS. I think so, Senator. The provision where the Federal land bank holds the bonds until such time as the Secretary of the Interior certifies that the project is worth twice as much as the amount of the bonds, at which time the committee or the bank would sell the bonds and reimburse the Government. It seems to me that would cover it.

Senator JONES. If it did not cover a situation of that kind, it would not be worth much.

Gov. DAVIS. Not very much.

Senator JONES. Because most of the arid lands are unsettled.

Gov. DAVIS. Yes, sir.

Senator KENDRICK. As I read the bill, it is done under a plan of initiating the project by the people who are already in the section; the responsibility of it would fall upon the people who are already in that section of the country, and who are interested in the lands, and in the absence of that the project would hardly be started; there would be no means of starting it.

Gov. DAVIS. No doubt the district itself, Senator, would bear that burden, but we feel that the bill can be made workable to develop a project and open it up, and the settlement of a project is what is going to enhance the value of it, the reclaiming of it and the improving of the land to bring about this double the amount of the bonds in valuation that the Secretary would be called upon to certify, when the bonds would be sold.

As you know, gentlemen, irrigation has outgrown private capital. The projects that are left in the West are large, and it requires the expenditure of large sums of money, so individuals can not reclaim these lands, and individuals are slow to form companies and corporations that would be able to put on reclamation in a general way at this time.

Senator GOODING. There is nothing in this bill that would prohibit the reclamation department, or the Secretary of the Interior going on the same as in the past with Government projects.

Gov. DAVIS. Certainly not; and there is nothing that would prohibit individuals and private capital going on in the usual way of securing segregations for the purpose of developing projects. And we would dislike very much to see that avenue closed, because there may be times when private capital would be interested.

It is not your understanding, is it, Mr. Chairman, that this bill closes the avenue to private capital in the future to go through the course that is now permissable in getting segregations from the States for the development of private projects?

Senator KENDRICK. That was not the question.

Gov. DAVIS. Pardon me, I did not understand you then.

Senator KENDRICK. The idea was whether the reclamation department, as it exists now, will continue to take up, on its own initiative, projects that are not contemplated under this new act.

Senator JONES. Let me suggest, Senator Kendrick, that when we get into executive session to perfect this bill that can be made clear.

Senator GOODING. I agree with the Senator from Wyoming that it must be made clear.

The CHAIRMAN. If there is nothing further to ask the governor—we thank you very kindly, Gov. Davis.

We will now hear from Gov. Mabey, of Utah.

STATEMENT OF HON. CHARLES R. MABEY, GOVERNOR OF THE STATE OF UTAH.

Gov. MABEY. I have nothing further to add to what Gov. Davis has said, except to say that the State of Utah is behind this movement along with the other Western States. We indorsed the action taken at the Denver conference last week and are wholly in accord with the idea.

As you know, Utah is the State which initiated irrigation in this age, and I believe we know the problems which confront irrigation as well as any other State. In our State, as the governor very tersely said, we have outgrown the power of private capital. When we first went there the small streams were taken out onto the land and utilized for irrigation purposes, and then the larger streams, and now the bigger projects come up and we are unable to finance them.

There is one feature connected with this bill which Gov. Davis asked me to speak upon, and that is the care of the ex-soldiers. As an ex-service man, I feel I am directly interested in anything that might be done to benefit these men. This particular bill does, because it takes care of one of those plans which the soldiers themselves are desirous of putting across in this Congress. And I believe that there is no way in which the ex-soldier can be better taken care of than providing him with means of gaining a home. Of course, as you all know, in the discussion that has come up in Congress, there are some soldiers that do not want to be taken care of in that way, but for those who do, this settles the problem for them. And I might add, as I understand it, in the last Congress the House decided to make an appropriation of a character similar to this in taking care of the soldiers.

Another feature that appeals to me in connection with this measure is that it does not call for an appropriation. I know there are two ways of looking at that, but it is scattered over a number of years. This money will all be returned to the Federal Government, in spite of all the arguments that may be brought to the contrary. Not only that, but the Federal Government will be paid interest on every dollar. I have enough faith in irrigation, as I have seen it come out in my State and States surrounding, to know that the Government will not lose a dollar of any money that it may loan to the States at this time, or any future time, for irrigation purposes.

I do not know of anything further I have to say on the matter. Any questions that may arise I shall be glad to answer as nearly as I can.

The CHAIRMAN. Does any member desire to ask any questions of the governor?

Gov. MABEY. If the chairman and the members of the committee will excuse me, I shall have to catch a train.

The CHAIRMAN. We thank you very much, Governor, for your attendance.

We will now hear from Gov. Campbell, of Arizona.

STATEMENT OF HON. THOMAS E. CAMPBELL, GOVERNOR OF THE STATE OF ARIZONA.

Gov. CAMPBELL. Mr. Chairman and gentlemen of the committee, we feel, in coming here, that nothing more than our presence is required, for in our informal discussions with you gentlemen on the problems of reclamation we feel that further discussion is unnecessary. We feel that this committee, composed mostly of men from the arid and semiarid States, are appreciative of the great boon that it has for the future as well as the present of this country.

So I am not going to attempt to discuss or make any brief with reference to irrigation as a general policy.

As the representative of one of the States in the West that has had a wonderful growth, due to the reclamation of its arid lands—Arizona—I simply want to subscribe to this thought this morning: That, primarily, the Western States are mining States followed by stock raising, and you know and I know that in a few years, speaking comparatively with the life of a Commonwealth, the mines will be practically exhausted. We have a typical example of that in Nevada, where hundreds of millions of dollars have been taken out in the mineral resources of the State, and they are becoming exhausted, and during that period of exhaustion nothing has been done by the State or National Government to put anything in its place. We have an example there that all of the Western States are desirous to avoid, and we are desirous of putting in something that will be a perpetual benefit to the State, and we look to reclamation to do it by putting water on these lands. You know and I know, Senator Kendrick, that there is an actual lessening of the herds of cattle and sheep on the western ranges.

Senator KENDRICK. Mr. Chairman, I would like to suggest this thought to the governor; he, perhaps, would come to it a little later: That this development is a development that goes hand in hand with the mining, even though we deem the mines inexhaustible. This is a development that should go hand in hand with the mining.

Gov. CAMPBELL. That is true; we find in my State, and your State, they go together. And this is one thing that we sometimes overlook, the stabilizing influence that is brought about by the great farmer folk that go into these States. We have seen it demonstrated in our own State in these great projects that have come into their own.

So we look upon reclamation as being the salvation of the Western States in the future. And we have come on here to ask Congress to help us.

Gov. Davis and Gov. Mabey have brought out that they think this is the best bill that has come forward, so we are here to support it, and to bring you arguments, if that is necessary, as to the desirability of the bill.

The CHAIRMAN. Is it your opinion, Governor, that the further development of the West is dependent upon some large, comprehensive plan of irrigation and reclamation?

Gov. CAMPBELL. Absolutely. I think we are through, with the exception of the higher elevations that get a sufficient rainfall during the season to insure a good crop under the circumstances.

The CHAIRMAN. I do not care to go into that in great detail, but how many acres have you in your State that do not have water on them now for the lack of funds?

Gov. CAMPBELL. We have at the present time approximately 535,000 acres under irrigation in addition to the two large projects, the Salt River project and the Roosevelt Dam, and the Yuma project. By the water which is now wasting itself into the Gulf of California, and by the use of the water of the Gila River, it is possible to reclaim not less than 800,000 acres of land.

Senator SHEPPARD. In addition to the 535,000 acres?

Gov. CAMPBELL. Yes, Senator.

Senator KENDRICK. And that would have a productive capacity of more than twice the same number of acres in a northern State?

Gov. CAMPBELL. Yes; due to the climatic conditions in our State. We have found out this, too, in our State, that it takes just about 3 acres to support one person. In other words, we find one project that has an area of 300,000 acres and it is supporting a local population of 100,000 people.

And our future, if we are to be anything but a sagebrush State—one which is mostly known by the western novelists and the movie actors—we must have something of this sort. We are not a new State, as you know, and we have the great copper camps of the world there, but they are going to be exhausted; and so with the live-stock interest, and that is what it means to us.

Senator GOODING. Your State is at a standstill without some assistance such as this bill provides?

Gov. CAMPBELL. Yes, Senator.

Senator GOODING. That is true of Idaho—it is at the end, unless we get some help of this kind.

Senator JONES. Isn't that true generally throughout that part of the country as an agricultural country—it must have reclamation?

Gov. CAMPBELL. I think so, Senator Jones.

Senator KENDRICK. And in your State, as in other States, this plan of development would be much the same, if carried on by the partial assistance of the Government, as an individual who borrows money to develop his own property; it is practically all Government land?

Gov. CAMPBELL. Practically all Government land. And there was one thought you suggested, as to who would handle the big tracts of land on which nobody now lives and which are yet susceptible of irrigation. I am of the opinion that that would be handled by an amendment to this bill here.

Senator SHEPPARD. Do you mean to say that the 1,800,000 acres which can be reclaimed in addition to that already reclaimed are Government lands?

Gov. CAMPBELL. Not all of them, but probably the majority of them.

Senator KENDRICK. Probably 90 per cent.

Gov. CAMPBELL. Yes; including the Indian reservations.

Senator SHEPPARD. Were the 535,000 acres already reclaimed all Government lands?

Gov. CAMPBELL. At the time of their reclamation many of them were private lands. I would say a majority of them were private lands.

The CHAIRMAN. In a general way, how much territory in your State is not taxable at the present time?

Gov. CAMPBELL. Fifty-two million acres out of 72,000,000 acres, embracing the total area is untaxable, wrapped up in Indian reservations, forest reserves, and public lands. In other words, all but 20,000,000 acres is land possessed by the Government.

Senator KENDRICK. Almost a total eclipse.

Gov. CAMPBELL. Yes.

Senator JONES. Are there any land grants in your State?

Gov. CAMPBELL. A few, but mostly small ones.

Senator JONES. Not large ones?

Gov. CAMPBELL. The largest one is 100,000 acres, but there are some smaller. There is one grant where they are now pumping water out of the river and are experimenting with the rubber plant.

Senator JONES. How far have they gotten along with that experiment?

Gov. CAMPBELL. They are just at the fifth year, when they are supposed to be able to reduce the rubber, and they find rubber now lower in price than it has been at any other time in its history. There is no question about the possibility of it, but there is a doubt of raising it and competing with the overseas labor.

Senator GOODING. You think it can be done?

Gov. CAMPBELL. Oh, it is being done.

Senator JONES. Do you get any gutta percha from that?

Gov. CAMPBELL. No, sir.

Senator GOODING. We use 80 per cent of the rubber used in the world; we paid $300,000,000 to foreign countries last year, so you have a chance on that.

Gov. CAMPBELL. But we can not compete with the foreign labor.

Senator GOODING. No; or anything else—the cheap labor, or anything else in the tropical countries. How about your long-staple cotton; is it possible for you to raise that?

Gov. CAMPBELL. Yes, indeed; there are wonderful possibilities there.

Senator KENDRICK. How does that compare with the Egyptian long-staple cotton?

Gov. CAMPBELL. We, of course, contend that it is superior in strength and has a finer luster. In the market it grades just about the same.

Senator KENDRICK. Then you admit it is just as good?

Gov. CAMPBELL. Yes; we say that hesitatingly; we say it is better.

Senator ODDIE. Many others agree with you.

Gov. CAMPBELL. If necessary, we could prove it.

Senator GOODING. It is not necessary with us; we know it.

Gov. CAMPBELL. Unfortunately cotton is off at present, and we have been greatly depressed for that reason this year.

Senator ODDIE. Governor, is it not a fact that the Goodrich Rubber Co., in building its large tire plant in Los Angeles depended on that cotton?

Gov. CAMPBELL. Yes; so I understand; they have looked forward to getting sufficient long-staple cotton in Arizona and northern Mexico to carry on their entire business, which was tremendous at the time that plant was constructed, and bringing the rubber from the East Indies; and another interesting thing, they were shipping their tires through the Panama Canal to the Atlantic seaboard cheaper than they could ship by rail, which was an ideal condition.

Senator ODDIE. We expect to furnish some of that long-staple cotton, too, from Nevada.

Gov. CAMPBELL. Yes; you have a wonderful opportunity.

Senator GOODING. It would not be a bad country with water.

Senator KENDRICK. It has all good society, anyhow.

Gov. CAMPBELL. Thank you, Senator; we will try to live up to that.

Senator SHEPPARD. I think it would be well to have Gov. Davis give us the number of acres now in his State reclaimed.

Gov. DAVIS. I don't know that I can give that in accurate figures.

Senator SHEPPARD. Approximately. I thought it would be well to have it in here.

Gov. DAVIS. We have, as I recall it at this time—perhaps Senator Gooding can correct me on this—somewhere between 1,750,000 and 2,000,000 acres under irrigation in Idaho all told. Isn't that about right, Senator?

Senator GOODING. Yes.

Gov. DAVIS. I am including everything now; not just taking the reclamation projects, but all irrigated land in Idaho; about 2,000,000 acres more available. And we have water in Idaho for this. You see, the Snake River travels in Idaho close to 1,000 miles. You can cross it every few hours and it is still Snake River.

Senator KENDRICK. Where does that river rise; where does it have its source?

Gov. DAVIS. Yellowstone Park.

Senator SHEPPARD. You have a larger project in mind for Snake River?

Gov. DAVIS. Oh, yes.

Senator SHEPPARD. You have that in contemplation there now?

Gov. DAVIS. Oh, yes; the building of the falls at American Falls—three and a half million acre-feet—and it is very economical of construction; the cost per acre-foot; if built to capacity, is around $5 a foot, which is considered very cheap.

Senator KENDRICK. Where is it proposed to build the dam?

Gov. DAVIS. Right at the crossing of the Oregon Short Line Railroad, at the American Falls.

Senator KENDRICK. In Idaho?

Gov. DAVIS. Yes, sir.

The CHAIRMAN. We thank you very much, Gov. Campbell.

We will now hear from Mr. Dodson, who represents the governor of Oregon.

STATEMENT OF MR. W. D. B. DODSON, REPRESENTING GOV. OLCOTT, OF THE STATE OF OREGON.

The CHAIRMAN. Mr. Dodson, give your name.

Mr. DODSON. W. D. B. Dodson.

The CHAIRMAN. And your present occupation?

Mr. DODSON. My occupation at the present time is manager of the Chamber of Commerce, of Portland, Oreg.

Mr. Chairman, to begin with, I wish to express to the committee the feeling of our people, which I would say is practically unanimous, that we regard this bill as the greatest constructive measure, the most promising measure, and the most hopeful measure that has been brought out of the West and for the West for a long time.

We think the features provided in the bill, providing a revolving fund, getting away from the frozen features of a fixed fund provided before, and giving a market for the securities with something the Government secured behind it, we believe is a wonderful promise, and we of Oregon are ready to do more than our part to do anything under the sun to accomplish the enactment of this measure which is now before you here. And in saying that I speak for all the people, private and public, and irrigating and nonirrigating sections. We are very hopeful.

In a general way, Mr. Chairman, I would like to add a thought or two here that I, at least, have not seen in the records of your hearings. First, as to the possibility of reclamation in the West generally, although, of course, I am most familiar with the Columbia River Basin or the Columbia watershed country. That stream discharges through the gorge at the cascade 154,000,000 acre-feet of water on a 30-year measurement basis annually. The tributaries furnishing this supply between Oregon and Washington is something like 98,000,000 acre-feet. The Snake River brings down 49,000,000 acre-feet, and other streams also bring down large amounts of water, and the smaller streams furnishing something like 11,000,000 acre-feet of water, all flowing through sections that at least some part of, in some measure or degree, are susceptible to irrigation. What percentage of that total water might be made available is, of course, for the engineers to estimate and for the practical workers. But it must be practical in some way.

Now, looking over the records of the West, we find the Colorado with a large flow. The California streams in the northern part—there are streams that flow ten or eleven million acre-feet into the Sacramento River.

We believe there are large possibilities in the West that should interest the Federal Government very profoundly and deeply, if this Government is interested, as it is, in having more people on the soil, and producing our food supply, and raising our food products, instead of importing them. Of course, we believe that is of important interest to the country.

I would like to make one other remark: West of the Rocky Mountains there is about one-third of the area of the United States, and between one-thirteenth and one-fourteenth of the population. You take your reclamation group, as I have figured it, I find there is approximately one-half of the total acreage of the United States which is found in the reclamation group of States; that is, including Texas in the group. These States are not producing one-half the quota of the Nation's wealth of those supplies that they can produce, and the great fundamental thing is to get them to produce it in those States. We have an abundance of water in those States, at least in many parts; we have an abundance of land, and the problem is, as stated by the governors, the problem has been in getting the combination of the capital and landowner and the Government-owned land together in such a way as to go ahead. We believe most heartily that the Government should do it. We have tried State experiments. We have even guaranteed five years' interest on a five-year project, thinking that would tide the man over. But this whole question is too large for private capital. We are up against the same problem that the other States are. Under the system of private promotion the maximum charge or burden that is permitted by law is on private capital. Under the Federal bill there is no doubt that you will get the minimum burden on the man, which is all important. The man is handicapped in many ways; for instance, by the distance from market. His transportation is high. And every dollar that can be saved in the reclamation of the land is of the highest importance to get the people to settle on that land and get people onto it for improvements.

In a general way I want to make one suggestion—and I am speaking in generalities: This is one of the seaboards of the United States; the Pacific seaboard. It has approximately 7,000,000 people. It seems to me it is of the highest importance to this Government, looking at it industrially, economically, or in a military way—whatever way you view it—that that seaboard should have a substantial population, and with a variety of industry and interests that would make it a protection to this entire country.

Another feature: One of the greatest markets that this country will have in the future is in the Pacific markets, where one-half of the population of the world is found. Your industrial development, in reaching this business on a competitive basis, is going to depend in a large way on the plans of agriculture with industrial development. I think this entire country should be deeply interested in this.

Now, the question as to the percentage of land that could be irrigated in the State. I will not undertake to answer that, because I take this position: We have many districts there in which there has been no careful computation made. There is a certain amount of water coming out into the main streams, and some percentage of that can unquestionably be applied to the land. I have given you the waterfalls of the larger streams. My optimism carries me farther than that of the engineers, although I do not attempt to be accurate, and I hope I do not deal too much in hot air, but I do believe that some large reclamations are possible, and I believe when the engineers get onto the work that they will later on discover a greater acreage than their first general view of the situation suggested. And I believe that we will have a growing of acreage wherever waters are available over what is now computed.

Senator SHEPPARD. How much land is now under irrigation in Oregon?

Mr. DODSON. About 1,300,000 acres in Oregon, of which a small part is Government land. We started way back under the Carey law, under which the producer paid 100 per cent more for his finished acreage than the actual cost of the work; through promotion and discount of the bonds we did some of that. And then we took up the work and organized districts under a special law, and we have done everything we know how to do.

Senator PHIPPS. You have evidently gathered some statistics on various topics. The Pacific coast section is not essentially a manufac-

turing region at the present time. Do you have any figures showing about what your purchases from eastern sections in the way of manufactured goods amount to; and, following that, what would be your opinion as to the effect the development and settling up of this vast agricultural area would have on the manufacturing enterprises of the eastern section of the United States?

Mr. DODSON. I have not gathered figures as to the total importations even into my own State, or other western States, of eastern manufactures, except in specific commodities. We have done it with reference to certain industries, like iron and steel, and agricultural implements where we had made a study with reference to specific lines of manufacture. I have not those figures with me. We have them in our office, and I would be glad to furnish them to the committee in those things which we have gathered.

Senator PHIPPS. I will suggest that you address a letter to the chairman, giving us that information. It might be of value, because, as I take it, you do not expect to be able to provide your own wants in those particular lines in the immediate future; there is no present development that would give basis for any such hope, is there?

Mr. DODSON. No; every increase in population, although we increase in manufacture, brings more business to these manufacturers. That is best illustrated by Japan. It was feared that Japan, one of our greatest buyers, when they began to develop, that instead of becoming a buyer, would become a seller. Instead of that, Japan has increased her wealth enormously, but she is buying largely from the United States. And that same principle would be true of the eastern part of the United States—even though we did increase in manufacturing, there would be a vast buying power that we unquestionably would have.

Senator KENDRICK. Is there a part of your State in which the rainfall is sufficient so as to make irrigation unnecessary?

Mr. DODSON. We have practically the western part of Oregon that does not need irrigation. It is, roughly, one-third of the State, the Lamath Valley, four or five million acres in that. Lamath Valley would be benefited by four or five months of irrigation. But there is abundance of water in that, and that does not require Government assistance. It is only where the projects are so large that it requires the impounding of the waters.

Senator KENDRICK. And that territory is largely in the eastern part of the State?

Mr. DODSON. Yes; and then I should say, too, in the southwestern part of the State it has need of irrigation. The rainfall is approximately 15 or 16 inches. The part of the State where the rainfall is not sufficient is absolutely dependent on irrigation for agricultural development.

Senator KENDRICK. In all probability Oregon and Washington have a larger proportion of water for the land to be irrigated than any other State.

Mr. DODSON. Any land tributary to the Columbia River. Columbia River is almost as large or has almost as large a waterflow as the Mississippi River.

Senator PHIPPS. Following up the question I asked you a moment ago, the reason for that would be apparent: When it comes to a large governmental appropriation, the people of the East may take

it that this is an expenditure of Government moneys for the benefit of the arid States, and that it is sectional, and they derive no benefit from it. Is it not a fact that the communities of the East, the populous sections, would benefit very largely from the further development of the agricultural sections, not only through being provided with produce, which they can not raise on their eastern farms, but by having a market for their manufactured products?

Mr. DODSON. I think it is the best investment the Eastern States could make, from the standpoint of business, because these Western States are known as being within the tariff wall. They are the best market they can get anywhere; they can never get the same prices outside of the United States as they can in the United States. I would undertake to demonstrate that with figures and illustrate it.

Senator KENDRICK. Do they not further take the attitude that this is to enable the people of the western country to develop their land, entirely overlooking the fact that the land which is already settled has been settled by people from the East, and that these people in the populous sections, where they are complaining of overcrowding, are always welcome and have as much opportunity to reside there as the western people?

Mr. DODSON. It has that benefit also, in addition to this other. There are 153,000,000 acres of ground in the United States in forest reserves, and about 35,000,000 acres of ground in the Indian reservations of which most all of it is in this group of reclamation States. Now, 20,000,000 acres of that forest reserve is in Alaska, but the remainder is almost entirely, for practical purposes, within the States.

Now, Mr. Blaine made an estimate of the values carried in the acreage withheld from taxation. We have made a computation in our own State, and based on the values placed on adjoining lands by the county assessors on lands immediately adjoining the forest lands, it runs well above $1,000,000,000 that would be to-day the assessed value that would be placed on our million acres of forest lands.

And I would like to leave this thought, that this reclamation group of States, with practically 100,000,000 acres which is carried for the benefit of the future—not for the present—but for the benefit of the future, with the enormous wealth of those lands withdrawn from our taxation and any immediate source of revenue to aid us in improving or developing our soils and our lands, I think the Nation ought to give us more consideration on that ground.

I thank you very much.

The CHAIRMAN. Does anyone desire to ask Mr. Dodson a question? [After a pause.] If not, we thank you very much Mr. Dodson.

We will now hear Mr. Frank W. Brown, secretary of the Western States Reclamation Association.

STATEMENT OF MR. FRANK W. BROWN, SECRETARY OF THE WESTERN STATES RECLAMATION ASSOCIATION.

Mr. BROWN. I thought, Mr. Chairman, it might be of interest to tell you of a trip I took a few weeks ago where I visited 10 families on one of the big irrigation tracts in Idaho, stopping at the house and asking a few questions there, and then as the man of the house was in the field, I went out and talked to him. I stopped at 10 places

in the Minidoka tract, and I found but one man who had ever been a taxpayer before. They had all come out there, most of them poor, and they were living—not in luxury, but more comfortably than they had ever lived before. This one man, who had been a taxpayer, was still paying taxes on his farm which he owned in Nebraska, but he was developing this piece of ground for a division among his children.

I questioned a number of the people relative to what they had had in their homes before, and found that none of them had enjoyed such a thing as a phonograph or a piano, or many of the different things which are manufactured in the East. And the estimate that I made after these conferences, and based on what information I could get, was that there was not a family there but what was getting more than three times as much in income, and therefore producing three times as much in wealth as they had ever been able to do before.

Out of the 10 there were 7 who had never farmed before they went onto that tract. I asked them if they found farming a hardship, and in no instance did they say that they did, and in every instance they claimed that their life at the time was more comfortable and more happy than they had ever enjoyed before. And I asked the question as to how they had learned to farm, coming out there unskilled, and in each instance they thanked the extension service of the university and the men who were there for the Government, for the Reclamation service, for the assistance that they had had, and also credited their own observation and ambition for their success. And I have discussed the matter with members of the university extension service several times, and they say they can make a better farmer out of a man who has ambition and wants to make a home who has never had any experience than they can out of a man who has been raised in that trade.

And I believe that there is absolute proof on every irrigated tract in the United States that eastern manufacturers and jobbers have developed a great new territory and trade through the development of the irrigated tracts of the West.

I thank you, Mr. Chairman and gentlemen.

The CHAIRMAN. We thank you, Mr. Brown, for appearing here.

Gov. Spry, do you desire to conclude your testimony of last week?

FURTHER STATEMENT BY HON. WILLIAM SPRY, COMMISSIONER OF THE GENERAL LAND OFFICE.

Commissioner SPRY. If there are any questions, Mr. Chairman, I would be glad to answer, if I can.

The CHAIRMAN. I recall that Senator Kendrick wanted to ask you some questions.

Senator KENDRICK. Mr. Chairman, I have not had an opportunity to study the bill as carefully as I would like to before asking the governor some of the questions I have in mind. And also some of the points I had in mind have been sort of brought out this morning here in the discussion of the problem. One of the things I was anxious to secure an expression from the governor about was this one we raised awhile ago, whether or not under the present bill we would be terminating the authority of the present reclamation act to initiate projects as it has been heretofore.

Commissioner SPRY. Senator, all of the operations of the Reclamation Service will be retained as they were under the original law.

Senator KENDRICK. As they were enjoyed before?

Commissioner SPRY. You will notice, as you read the bill under discussion to-day, everything that the service will do will be done according to the law already written, with the exception of a few, which this law provides, in the way of organizing your irrigation districts and the issuance of bonds, and providing for the payment of those things. There is no reason why the Reclamation Service should not go along just as it has been going along.

Senator JONES. In other words, the main portion of this bill is to raise money to go into the reclamation fund?

Commissioner SPRY. That is all; to enable the reclamation people to operate still further than they have ever been able to operate before. It is an extension of the present reclamation law.

Senator KENDRICK. Instead of a limitation?

Commisioner SPRY. Instead of a limitation.

Senator GOODING. Making possible the development of these arid lands within a reasonable time.

Commissioner SPRY. Much more rapidly than they would be developed under present conditions, because you are always short of funds.

Senator GOODING. I have made this statement before, and I want to make it again, and if I am incorrect in it, I wish you would correct me: Our irrigation law, I think, in general terms, has been in existence something like 20 years?

Commissioner SPRY. Yes, sir.

Senator GOODING. There are nearly 2,000,000 acres of Government land reclaimed up to the present time?

Commissioner SPRY. Approximately.

Senator GOODING. I think we have something like 22,000,000 acres yet to be reclaimed for which there is water available for reclamation; that under the progress which we have made under the reclamation act it will take 240 years for the Government to make these reclamations, if we proceed along the same line and make the same progress we have made in the last 20 years. So, of course, if we are going to bring this land into usefulness within a reasonable time, something like this is necessary?

Commissioner SPRY. It is absolutely essential, Senator, if you want to reclaim that land within a reasonable time.

In passing, let me suggest—I know there is some complaint made by some of our friends in the East that we are asking an enormous sum of money from the Treasury of the United States for this purpose, $250,000,000. I would say to these gentlemen in the East, the manufacturers who are represented by the men who are making these statements—the manufacturers are making profits every year in the West equal to the amount that you are asking the Federal Government to furnish in order that you might carry this reclamation work to a successful completion.

Senator KENDRICK. And this bill would have the result of increasing their profit?

Commissioner SPRY. Absolutely; every additional family that you put on the land is increasing their profit to the amount that they are sending out their manufactured goods. I think it was James

Hill who remarked one time, when asked what settlement meant along his railroad—he said that every family that settled along that railroad meant $3,000 a year to him. If it meant that much to the railroad, how much would it not mean to a man who is sending out his goods to these people?

Senator JONES. Have you given any study to the development of any special lines in the arid sections?

Commissioner SPRY. Not any special study, Senator; but, as a matter of fact, they are specializing. Take Gov. Campbell's State, on this long-stable cotton, for instance, and the rubber of which he spoke. The climatic conditions have controlled largely in those affairs. We are making more money in Idaho and Utah and Colorado on sugar beets than we were making formerly on wheat and barley and oats.

Senator JONES. Can you give us any facts with reference to the possibilities and the necessities of development along the sugar-beet line?

Commissioner SPRY. Well, the necessity is apparent from the fact that we are only producing about one-sixth of the total sugar consumption of the United States. Now, there is not an acre of land in that western country but what will produce sugar beets successfully and profitably.

Senator KENDRICK. Commissioner, does that estimate of our production include the Louisiana production?

Commissioner SPRY. Yes, sir.

Senator JONES. About how many acres would it take in the production of beets to meet our demand?

Commissioner SPRY. Out in my country it will take probably—well, the average production of beets to an acre is possibly 13 tons; it varies slightly in the various States. An acre of sugar beets with proper saccharine substance will produce twelve 100-pound bags of sugar.

Senator JONES. That is, a ton of beets will produce about 100 pounds of sugar?

Commissioner SPRY. Yes; and you can produce about 13 tons on an acre. The yield will vary with Colorado and some of the other States. Some States are producing as high as 40 tons, and others 5 or 6.

Senator JONES. It is a mere matter of computation as to what would be necessary to supply our demands.

Commissioner SPRY. That is all.

Senator GOODING. Mr. Chairman, I have made this statement a time or two at our meetings, and while Gov. Spry is here and the other governors and their representatives I would like to make this statement again: In my State, I have said, Gov. Davis, outside of the forest reserves and the Indian reservations, there is not a single 160 acres of land that can be taken up by the homesteader where he could go and make a living; that is, outside of the forest reserves and the Indian reservations, there is no longer any opportunity for settlement in our State.

Gov. Campbell, what is the situation with you—is there any chance for a homesteader to take up land and make a living and increase the productiveness of his land?

Gov. CAMPBELL. Not unless he comes in under some project.

Senator GOODING. Not unless he gets some land with water?

Gov. CAMPBELL. Yes, sir.

Senator GOODING. Governor, you can speak for Utah; what do you say?

Commissioner SPRY. I agree with you.

Senator GOODING. What do you say about Nevada, Senator?

Senator ODDIE. Practically the same thing is true.

Senator GOODING. What do you say about Oregon?

Mr. DODSON. Practically the same thing is true about Oregon. You are speaking about the homesteader?

Senator GOODING. Yes; the homesteader. His work is finished; there is no longer any hope of settlement for him outside of the forest reserves; some of the forest reserves might be taken. But there is no place else outside of the arid lands.

Commissioner SPRY. As a matter of fact, we are canceling homesteads and pasture lands every day, because of the homesteader failing to comply with the requirements on his land.

Senator GOODING. I want to make this statement: That there are a million young fellows coming into maturity every year and there is no place for them in this country except on these arid lands—to cultivate the soil; that is the only opportunity left. So, to my mind, it is a serious situation.

Commissioner SPRY. It is a serious situation.

Senator GOODING. Your best citizenship is moving out to find homes on the soil. It is not strange that the cities are becoming congested. This land that was taken up with the increase of population is all gone; that was the day of the pioneer, but that land is all gone, and it has given the cities a chance to develop, and now the cities are becoming congested. That day of pioneering and that period is past. We are confronted with a new condition. It is no longer a new country; the work of the pioneer is over.

Senator ODDIE. Mr. Chairman, Senator Phipps made a comment a little while ago on the increased purchasing power of the people of the West resulting from these reclamation projects. I would like to supplement that by mentioning something that happened at San Francisco last spring which is very apropos. There was a meeting of leading business men, which was addressed by Mr. Paul S. Reinsch, former minister to China. In discussing the problem of trade with the Orient, he stated that he favored the building of steel mills in China, because that would enable the Chinese people to increase their mileage of railroads and build numerous other plants, which would result in an increase in their purchasing power, which would mean a much larger business for our Pacific Coast States. The same can be said regarding the benefits that will come to the people of the Eastern States from these Western States' reclamation projects, because of the resulting increase in the purchasing power of the western people.

Senator KENDRICK. In other words, the more our territory increases and prospers, the more extensive the demand for the products of the East?

Senator ODDIE. Yes.

Senator GOODING. We haven't any manufacturing institution in Idaho to-day that might be called a manufacturing institution.

Gov. DAVIS. No.

Senator GOODING. All of our clothing and shoes and everything that we use, practically, is shipped in from the East.

The CHAIRMAN. Are there any other questions? [After a pause.] If not, we thank you, Gov. Spry.

We will now hear Mr. Carpenter, who represents the governor of Colorado.

STATEMENT OF MR. DELPH E. CARPENTER, OF GREELEY, COLO., REPRESENTING THE GOVERNOR OF COLORADO.

Mr. CARPENTER. Mr. Chairman and gentlemen of the committee, my business is that of a lawyer, whose practice is confined to matters respecting irrigation and interstate waters. My residence is Greeley, Colo., where I was born.

Mr. Chairman, I have not come here prepared with detailed statistics, my mission here being, primarily, as you have already been advised, on another subject.

But I want to state that the bill as framed—the bill now under discussion has a feature that I have not heard discussed here to-day.

I might supplement my statement by saying that my practice respecting irrigation matters has largely been that of a trouble shooter, a man who went behind the promoter and tried to clear up the wreckage. The great problem on irrigation development is the problem of bridging the development from the initiation of the project to a profitable and producing farm. The project is commenced; the settlement takes place; the lands are raw; everything has to be put upon it, in a sense.

Now, the finances: To borrow money requires interest, and the interest that would amount up during the period between the initiation of the project and the bringing of the farm into producttive remunerative condition becomes so burdensome and so large that it undercuts and undermines the money that should be used for construction purposes. It absorbs the larger part of it. The evolution of an irrigated farm from the raw sod runs from 3 to 10 years, according to the locality and the peculiar conditions and the advantages or disadvantages confronting it. In other words, a settler locating upon land requires, under an irrigation project where the land is new and raw, from 3 to as high as 10 years before the farm becomes a producing investment.

Now, the failure of a good many irrigation districts in the past where private capital has been invested has been almost always predicated upon the failure to bridge that period. This bill, as I take it, provides for the bridging of that critical period in a development. When these farms are put upon a productive basis their power to repay is so much more rapid than on ordinary agricultural land that it quickly recovers itself.

Senator GOODING. Let me say that much of our failure in Idaho—and I had much to do with the Carey Act—all the failures came at that period; you are quite right.

Mr. CARPENTER. Now, the second feature is this: An impression obtains in some of our sections that the Government in the past has been building the projects—I might say that this impression is

purely among the ill-advised—in order that it might give something free to some people. I am speaking particularly of people who come in with the idea of acquiring land under projects. In other words, that the Government has been engaged in a paternalistic plan, when the opposite is the truth. The Government has attempted to run this business upon a business basis. That is simply a repetition of the history of the development of the arid West. I think Senator Kendrick will bear me out that in Wyoming there is probably not a single project constructed by corporations where the water was leased or sold—particularly leased under contract, where the management is now in the hands of the original corporation. And, second, that these corporations were comparative failures, if not desperate struggles, up to the time when they went into the hands of the farmer himself, when instantly, compared with the time required for general development, they came into full bloom as going and prosperous concerns. In other words, the science of agriculture is such that the true development can only be obtained when the farmer that is farming the land owns and controls and manages the water system which furnishes him the water; and anything which tends to weaken that absolute dominion of the farmer over the water supply——

Senator KENDRICK (interposing). Proprietary supervision.

Mr. CARPENTER. Yes. It ruins the project itself. It is a peculiar something which many of us have studied for years with the hope of arriving at a solution.

Senator SHEPPARD. You mean that under Government supervision the Government itself exercised that dominion?

Mr. CARPENTER. The projects have not prospered. There is a tendency among the farmers to lean upon the Government and not exercise that dominion; that is a tendency of all selfish people, to get out from under. But the project as a whole, looking at it from the bleachers, so to speak, when the farmer gets the entire control, from that time on the project moves satisfactorily to its successful conclusion, and our great prosperous communities throughout the West were built up with that history attendant upon their growth.

I might illustrate: I come from the South Platte country. We have no Government projects there. We never needed the aid of the Government in our development. We have something like a million acres in that one valley that are irrigated.

The Travelers' Life Insurance Co. went heavily into the development of projects in that country, to prove that irrigation could be made successful. They constructed ditches, not only in the Platte Valley but in the Colorado and Rio Grande Valley as well. But after a time all the projects were charged off on the books of the company to profit and loss. It was purely a case of the projects where they had put in their money, and it did not work out, and it got out into the hands of the farmer, and the upshot of it was that the projects all went out into mutual farmers' companies.

Senator SHEPPARD. Cooperative?

Mr. CARPENTER. Yes; the farmer was the stockholder, and he elected his own board of directors, and handled his own property. From the day, figuratively speaking, that they went into the hands of these men it has been prosperous.

Senator SHEPPARD. Let me ask you: Did they not have a vote, and have a proportionate interest?

Mr. CARPENTER. A proportionate interest; he controlled proportionate to the interest held by him.

Senator GOODING. The Carey projects provide for that.

Mr. CARPENTER. The advantage of the irrigation district law is that it is the most intensely mutual of any known system of management. The irrigation district laws vary in the several States, but an irrigation district is a public or quasi municipal corporation; it has powers of eminent domain far in excess of that of private corporations. The property that it holds vests immediately in the district, as a public corporation, or branch of the Government, in trust for the project; that is, it vests in the project, but the water supply and the land are linked together in the most intensely consolidated form of management and government that has yet been conceived.

Senator GOODING. What do you have to say about this bill, Mr. Carpenter?

Mr. CARPENTER. I have only given this bill a comparatively hasty reading, Senator, I regret to say. Had I known I would be called upon to testify, I would have been glad to have gone into it more thoroughly. As I am advised, the irrigation district plan is the basis of this bill.

Senator GOODING. Yes.

Mr. CARPENTER. An irrigation district plan presupposes putting the property in a branch of the Government of the State. In other words, it looks to a local and State control. The Union, of course, is a union of powerful States. It looks not only to a Government development, but an intenser State and centralized government, and in such matters it is the most intensely mutual of all the plans, leaving the control of the property quickly in the hands of the farmer himself; hence it appeals to those of us from that section, as a very pronounced step in advance in this regard.

Senator GOODING. Colorado has been quite successful in most of its irrigation projects, has it?

Mr. CARPENTER. Yes; largely so. And that development, as I say, has nearly all been by private funds.

I might say, we have immense areas of land that will have to be prepared with large and extensive works, particularly on the Colorado River drainage. That takes in a little more than half of our State on the west. And the Colorado furnishes 60 per cent of the water that reaches the Zuni, in Arizona. But, of course, our lands that are arable are not in proportion; probably a million or a million and a half acres in that region.

We will have to depend for construction of works on some sort of public aid. I do not mean a contribution. I mean a loan, such as this bill contemplates, because our lands can all repay, and our people, if the system is correct, all through the West, pay their debts, and the farmers are only too willing to pay, if they are brought in a position to see where they will ultimately own and possess the thing itself.

Senator KENDRICK. Mr. Carpenter, your community of Greeley is one of the very oldest irrigated sections in the West, is it not?

Mr. CARPENTER. Yes, Senator Kendrick. I do not wish to detract from the credit due the earlier river-bottom development, nor from the development of the people who built the Salt Lake Valley project, but, other than that, the Greeley project is the beginning of the irrigation development in America. It was founded, as you recall, by W. C. Meeker, the agricultural editor of the New York Tribune, who was a scientist and a student of agriculture in a world-wide sense. He had the backing of the New York Tribune, and it was then that the institution known as the Union Colony in Colorado was founded, with a meeting in Cooper Union, New York. They selected a body of men who went out and investigated and reported, and they built their development, and from that all the further development throughout the West, I think, had its origin.

Senator KENDRICK. Mr. Chairman, I would like for Mr. Carpenter to give us some figures as to the approximate value of lands not under irrigation in that section within a few miles of transportation facilities, and then an estimate of the highest-priced land under irrigation in that section.

Mr. CARPENTER. I will take prewar values, although our lands were not affected by the land boom like others—like the Iowa boom, for instance. I might say at the outset that the lands adjoining the tracts which I will mention have a value to-day even of $5 to $15 an acre for so-called dry farming. The lands adjoining these dry-farming lands, under irrigation, will run from $175 to $350 an acre, according to the land itself and the improvements and other factors that enter in, including transportation. Of course, the nearer transportation they are the greater the value, because ours is a tonnage product. Our principal crop is potatoes and sugar beets, the greater percentage of which is water, but, nevertheless, it has to be hauled. The cheaper lands, the $175 an acre lands, are farther from transportation, but of equal quality with the others. Lands have sold in 5-acre tracts and up to as high as 40 acres at $500 to $600 an acre. If you will recall, Senator Kendrick, a great deal of that territory was in cactus, and could be purchased at $1.25 an acre. That is all due to irrigation.

One other thought, in line with Senator Phipps's question: As I sat on the wings, so to speak, listening, I may say, that after considering every article that I have in my pockets, except the coins that are minted at Denver, if any there be—every shred of clothing upon my person; the pencils and pens in my pockets; the watches, two of which I have, one belonging to Mr. Davis, of Las Vegas, and one to myself—all of that was manufactured here east of the Mississippi River. Our heavy farming in that country requires a special type of farming implement, which is made in the East. The farm implements are more expensive, in that they are better made, for the reason that they have to go up against greater hardships in the handling of the crops. Everything we have and everything we use, practically without exception, comes from the East. The furniture in our houses is produced at Grand Rapids, the automobiles at Detroit, and everything we use comes from the east of the Mississippi River, in the main.

Senator KENDRICK. Except food products.

Mr. CARPENTER. And again on that point, some of you will recall, doubtless, that a number of years ago, when we commenced to finish cattle and sheep in our region for the market, they had said theretofore that we would raise corn enough to offset the corn of Iowa and

become exporters of corn and compete with Iowa and eastern Nebraska. But to-day we finish millions of sheep and cattle in that country on their way between growing grounds of the mountains and the slaughterhouses, and perhaps 90 per cent of the corn we feed comes from the East, from Iowa and eastern Nebraska. We are importers of corn from Iowa.

Senator GOODING. You spoke of two principal crops. Should you not also include alfalfa hay?

Mr. CARPENTER. Oh, that is the basis of all.

Senator GOODING. Without that we could not exist.

Mr. CARPENTER. It would be hard, Senator. And it is interesting to know that when that alfalfa was grown near Greeley, and in Colorado in the seventies, it was considered worthless. I can remember myself on my father's farm, for a great many years it was considered that it ruined the soil. By accident they discovered that it improved the soil instead of ruining it. Afterwards by experiments that followed in this as well as in other regions it was found to be a fertilizer of the soil, as well as being the basic crop for food for animals. And I might say that some enterprising men out there have made a flour out of it, from which biscuits were made and were exhibited at our western shows.

Senator PHIPPS. Of course, you are not overlooking the importance of wheat and barley, and the forage crops?

Mr. CARPENTER. No, sir.

Senator PHIPPS. You simply meant the heavy tonnage crops?

Mr. CARPENTER. Yes. Usually on the higher priced lands are grown cabbage and beets and sugar beets, etc. But we grow wheat and barley and oats, and such crops as are fitted for that country and latitude.

Senator PHIPPS. Well, it is true we are probably being transformed from a mining to an agricultural State. Do you know what the tonnage was for the sugar beet last year?

Mr. CARPENTER. I regret that I have not that here with me. I did not expect to be called on to produce that. I might say that the county in which I live is the largest beet-producing county in the world.

Senator GOODING. I think your State produces more sugar than any other State.

Mr. CARPENTER. Here is another thought that I am reminded to bring in: The western soils are the stored agricultural fertility and energy of the years. The eastern soils have been leached by heavy precipitation. The soils, to take the other extreme in Arizona, are the soils as nature left them, whether by action of water or wind, or the breaking down of the native rocks; they are the soils with all their native salts and their fertilizing qualities held in place.

Senator KENDRICK. With the accumulation of the ages.

Mr. CARPENTER. With the accumulation of the endless ages.

Senator GOODING. In other words, they have not been washed out.

Mr. CARPENTER. They have not been washed out; and when water is placed on that soil it brings into action all that fertility, and if properly applied, need not injure the soil at all. In that connection the question came up recently as to what extent soils would leach out by agriculture. On reconnaissance, the investigators went no further because of this peculiar fact: Fifty per cent of all land, generally speaking, is air—in other words, soil is but an aggregation of rock, so to speak. The water pouring down into this soil, what goes beyond the reach of the plant roots, or the maintaining of capillarity, passes down and comes out again, and that takes with it some of the salt, which is then taken up the next year in the water, and it comes around with very little, if any, exhaustion of the salts throughout a valley. So that you might say that not only will the reclamation of these lands bring into effect this stored wealth but it will maintain that wealth in the ages to come.

Senator GOODING. There must be a rotation, however, of the alfalfa and other crops?

Mr. CARPENTER. Oh, yes.

Senator GOODING. That puts the humus and nitrogen into the soil.

Mr. CARPENTER. Yes.

Senator GOODING. Keep that in mind all the time.

Mr. CARPENTER. Yes; I might say this, that the greater per cent of the population of the world are supported by vegetable and plant life grown under irrigation.

Senator PHIPPS. Mr. Carpenter, you have referred to what appeals to me as one of the most important features of these problems covered by this bill—that is, the matter of bridging over the development period where the payment of interest or any other payment would be unduly burdensome on the settler of the land. Now, assume that the Government would not be willing to concede a loan, or advance of money without seeking a payment of interest, do you believe that as a rule—with some possible slight exceptions—the land to be brought under irrigation could, in time, repay the principal, plus accumulated interest, if the interest payments were deferred and added to the principal?

Mr. CARPENTER. Oh, yes; without possible question. Now, that is a big statement. Without possible question, the land to be reclaimed can pay the accumulated interest in due course.

Senator PHIPPS. Now, I am basing my question, and I believe you are basing your answer, on the fact that your experience in irrigation projects is not limited to the Weld County district, but to all types of irrigation lands, and all kinds of irrigation projects have come under your notice in your business as a lawyer?

Mr. CARPENTER. Yes, sir; in my business and practice as a lawyer it has taken me from the Missouri River to Colorado, and from Texas to Montana, and I speak advisedly when I say that allowing a bridging without interest from the time of the raw sod to the period of production, then you may overload your interest from then on and pick up the time of forbearance; but until that time comes you can expect little payment from the farmer, because his is a building from the grass roots up; he is taking everything to that land.

Senator GOODING. Even building the soil itself up.

Mr. CARPENTER. Yes, sir.

Senator GOODING. This bill proposes to capitalize him and carry it along until the time that the homesteader, the man going onto the project, is able to pay; he has to meet a thousand things, sickness and all those contingencies, and buy everything that he needs, and build from the grass roots up; and that is the strength of this bill.

Mr. CARPENTER. Yes. And one last thought, which I think should receive most emphatic emphasis. Prior to this war our loss of man power was in the departure of the farmer boys from the Middle States for Canadian lands. Our time for taking these boys into our domains in the West had passed in the main. The finest timber of American manhood has been going out into other countries; that is our greatest American asset, and it should be retained.

I thank you, gentlemen.

The CHAIRMAN. We thank you very much, Mr. Carpenter.

Mr. S. Lovenbein, national representative of the National Disabled Soldiers' League, desires to be heard, and we will hear him briefly.

STATEMENT OF MR. S. LOVENBEIN, NATIONAL REPRESENTATIVE NATIONAL DISABLED SOLDIERS' LEAGUE, SOUTHERN BUILDING, WASHINGTON, D. C.

Mr. LOVENBEIN. Mr. Chairman and gentlemen of the committee, I do not want to take up too much of your time, so I will talk fast. I will give you this for the benefit of the committee: A resolution was passed by the National Chamber of Commerce in Atlantic City last month, and we are in favor of this very resolution.

The CHAIRMAN. Yes; Mr. Blaine furnished us that resolution.

Mr. LOVENBEIN. This organization which I represent is made up strictly of disabled men. We realize that something has got to be done for the able-bodied man. We are against the cash bonus. We want the disabled man to get something. We realize that if the cash bonus is passed not only the disabled man gets that but the able-bodied man as well.

The CHAIRMAN. You are in favor of land-settlement legislation?

Mr. LOVENBEIN. We have got to have some kind of a land-settlement bill passed.

The CHAIRMAN. Have you read the provisions of this bill?

Mr. LOVENBEIN. Have I read the provisions of this bill? Yes.

The CHAIRMAN. Generally, is your organization in favor of legislation of this character?

Mr. LOVENBEIN. Of course, in the regular bonus bill that passed the House, there is a land settlement provision in there. But the soldiers will not take it that way. Therefore, I am in favor of a land settlement feature. If you pass a bill like the Legion indorses, not 2 per cent will take advantage of the land settlement.

Senator JONES. You understand this is primarily a reclamation bill?

Mr. LOVENBEIN. Yes, sir.

Senator JONES. It is not intended to take the place of any land settlement bill, but we do want to encourage land settlement by soldiers so far as we can.

Mr. LOVENBEIN. Why can't you add to this bill this feature: You have got to have men to dig the ditches and to run the engines, and so on, out there, why not add that feature, and give the soldier the preference there, too?

The CHAIRMAN. We have that in this bill.

Mr. LOVENBEIN. I did not realize that. I am glad of that.

Senator GOODING. It says he shall have preference; not "may," but "shall." If you read that, I think you will agree with it.

Mr. LOVENBEIN. Yes. And we have this also in this resolution:

For the purpose of affording ex-service men an opportunity to cultivate the soil, we favor a national system for reclamation of waste areas. Such a system initiated through adequate Federal appropriations, can be made a means which, while providing opportunities directly for former members of the armed forces, will advance the national interest.

We are in favor of the last two words; not only the soldiers, but the national interest, the country at large, as well.

The CHAIRMAN. We thank you very much, Mr. Lovenbein.

I have an interesting statement prepared by Mr. Frank W. Brown reciting the history of irrigation, which I desire to put in the record, and without objection, it may be inserted.

(The paper referred to is here printed in full, as follows:)

The oldest record made by man, according to scholars, is graven upon an Egyptian monolith and the artist chisled it something like one hundred centuries before Christ. It depicts a man raising water from a river by means of a pole with a bucket suspended from one end of a crossbeam, with a weight at the other end as counterpoise. Travelers along the Nile, above the sea where the British have engineered, can to-day see the same picture, identical in every detail, as the brown-shinned fellows patiently weld their clumsy shadufs, dipping into the old River of Life and in laborous bucketfulls drenching their little plots to fertility.

Without water Egypt would be an unending stretch of burning, barren desert. That monolith was found buried among flint knives and implements, proving that man was still in the prehistoric state. But he emerged when he began to use crude machinery and to irrigate. That primitive system was the reason that Egypt founded the first society which can be classed as civilized. If there be a rival for this claim to antiquity it is India, and there the inscriptions in caves and on hoariest temples show the same figures—a man working with a similar contrivance, known to-day as the paecottah. Man obtained his first mastery over nature in so far as definite assurance of reward for the seed he sows and tills through irrigation. With nature mastered man turns to the cultivation of his brain and his spiritual being.

So the world owes its first redemption from darkness, famine, and untimely death to the reclamationists. The history of irrigation from that day to this is a halting one, replete with long areas of stagnation and neglect. But within the last 40 years the master builders of the nations have quietly but splendidly advanced this wonderful utility. Since 1877 Egypt has had no fear of death from famine and to-day has probably as prosperous a people as earth ever saw in the descendents of that antique reclamationist. These raise the fine long-fiber cotton, sugar, rice, and wheat. India is being redeemed from piteous poverty and recurrent famines through vast systems of irrigation. Engineers, who know China, assert that the 20,000,000 that will starve to death in China this year could easily be fed had the plain, feasible, and engineeringly simple irrigation plans carried in the stricken area.

This land of ours has done much that is commendable to redeem the waste places. But the world is crying for bread. Our cities are choking with idle men and despairing women. Men's hands are quick to throttle and kill, for crime follows congestion when the wheels of commerce stop and want stalks. All the while there are 20,000,000 acres in the West which could be converted from desert waste to high productivity. That conversion from barrenesss to fruitfulness would give employment to hundreds of thousands of men, to the trained brained worker as well as the strong back lifter. The looms of New England must whirr to bring forth the cloth denizens of this producing section would wear. The makers of phonographs, machinery, of bonnets and automobiles, of school text books, and structural steel, of shoes and ceramics, of whatsoever prosperous men and women building homes and founding a modern society need, would have a market for their output.

We are asked this year to spend a great sum to continue war preparations, which may be good and necessary. But $250,000,000 spent in reclamation

over several years and granted as a loan only, to be repaid dollar for dollar to the Government would go further toward solving the problems which are addling our statesmen, confusing our economists, disheartening our people, than any other single agency.

The fellow of 100 centuries ago ushered in the first civilization. Might not the lesson gained, that this civilization can be regenerated through the same means? He raised his vivifier bucket by bucket, and the world came to him for food and trade and the arts. The American can build the mighty dam, prison, and release at pleasure, acres, miles, leagues of life-giving water. But the truth is the same color in both cases.

The CHAIRMAN. If there is nothing further to-day, and it is agreeable to the committee, we will adjourn to meet next Friday, May 27, at which time it is hoped that the hearings may be concluded on this bill.

(Whereupon, at 12 o'clock and 15 minutes p. m., the committee adjourned to meet on Friday, May 27, 1921, at 10 o'clock a. m.)

COOPERATIVE RECLAMATION ACT.

FRIDAY, JUNE 2, 1921.

UNITED STATES SENATE,
COMMITTEE ON IRRIGATION AND RECLAMATION,
Washington, D. C.

The committee met, pursuant to call, at 10.30 o'clock a. m., in the committee room, Capitol, Senator Charles L. McNary presiding.

Present: Senators McNary (chairman), Jones, Oddie, Shortridge, Walsh, and Kendrick.

The CHAIRMAN. The committee will be in order. Mr. Robinson, we will hear you now. Please state your name and business.

STATEMENT OF MR. FRANK W. ROBINSON, FREIGHT TRAFFIC MANAGER, UNION PACIFIC SYSTEM LINES, OMAHA, NEBR.

The CHAIRMAN. You have come here, Mr. Robinson, to testify with respect to Senate bill 536?

Mr. ROBINSON. Yes, Senator.

The CHAIRMAN. I am not going to ask you about the provisions of this bill at this time, but I would like to have you make a general statement concerning reclamation as you view it from a traffic man's standpoint.

Mr. ROBINSON. I would like to say, Senator, and to your committee, that in response to some inquiries made of our president, Mr. Gray, owing to his inability to be here, he asked that I represent him to the extent of my ability and to express to yourself and your committee his very deep regret for his inability to be present. He is greatly interested, as all of us are, in anything that pertains to the reclamation of the western arid lands. I have been particularly closely in touch with that situation during the last 15 to 20 years, so far as the States of Idaho, Oregon, Utah, and Washington are concerned.

The development of those States that I have just mentioned is almost wholly attributable to the fact that water has been placed upon those lands. Especially is that true of Idaho, which stands out preeminently as one of the western States the development of the resources of which has been remarkable under the influence of irrigation and as the direct result of irrigation. Utah is similarly situated, and the entire development of that State may be laid directly to the fact that water has been available for the lands. That is true also as to Colorado in a somewhat lesser degree, and likewise as to Oregon and Washington. A large part of the eastern part of Washington, practically the entire eastern part of Washington and Oregon, is subject to irrigation——

Senator JONES. Outside of the wheat belt?

Mr. ROBINSON. Outside of the wheat belt, and particularly is that true with regard to the Yakima Valley.

Senator JONES. Or the Columbia River Basin, really?

Mr. ROBINSON. Or the Columbia River Basin; yes.

I am not familiar with the trend of the testimony that may have been given before your committee, and what preparation I have made has been along the line of showing a comparison of the development in the irrigated sections and in the nonirrigated sections. As a result of some study and some comparison I find it is really almost startling to see the great increase in production in the irrigated sections as compared with the nonirrigated farming.

In that connection it may be of interest to speak of two counties by comparison. I take Twin Falls County, in Idaho, in which in 1900, just prior to the passage of the reclamation act, there was no farming and practically no population, speaking specifically with regard to the south side project, not a Government project but a Carey Act project. But the development in that district is typical of all the irrigation projects, Government or private.

As I stated, in 1900 there was practically no population in that district whatever. There were some scattering ranches where water was available for stock. As compared with that situation in 1900, in 1920 we find cities and towns of considerable size as evidenced by Twin Falls with a population of 8,500; Buhl, 2,500; Filer, 1,200; Hansen, 1,000; Kimberly, 600; Murtaugh, 500; and a farming population of possibly 1,500, and with irrigated lands under cultivation of 190,000 acres where prior to this time there was nothing but sage brush.

Senator JONES. Mr. Robinson, you have no data, have you, showing the amount of income and excess profits paid by those people in that locality to the Government?

Mr. ROBINSON. Not exactly in that way, Senator, but I have some comparisons of assessed valuations which it seemed to me might be of interest.

Taking Twin Falls County, which includes the south side tract, I will say that prior to the passage of the reclamation act Twin Falls County did not exist—that is, it has been created since that period. In 1910 the assessed valuation of farm property in Twin Falls County was approximately $10,000,000. In 1920, $30,000,000. The population of Twin Falls in 1910 was 12,000; in 1920, 29,500. The average acres per farm unit in 1910 were 90; in 1920, 59 acres. The number of acres improved and in farms only was, in 1910, 100,000 acres; in 1920, 190,000 acres.

In comparison with that I have taken Latah County in the northern panhandle district of Idaho, a most excellent farming district, with splendid soil, where nonirrigated farming is conducted very profitably and the holdings are not large as compared with the Palouse country, for instance.

In comparison with Twin Falls County, in Latah County, Idaho, in 1910 the valuation of farm properties, including permanent improvements, was $20,200,000; in 1920, $34,000,000. The population of Latah County in 1910 was 18,818; in 1920, 18,092, showing a decrease in population as compared with a very substantial increase in the population of Twin Falls County.

The acreage per farm unit in Latah County in 1910 was 174.5 acres; in 1920, 184.1 acres, showing an increase in the number of acres per farm unit, accounting in part for the decrease in population. That is in striking contrast with the decrease in the number of farm units in the Twin Falls section.

Mr. ROBINSON. In part; it is general farming, mostly grain.

Senator JONES. That illustrates the tendency in these Western States that in the irrigated sections the farm units tend to grow less, while in the grain-producing sections the farm units increase?

Mr. ROBINSON. Exactly, Senator.

Senator JONES. That is the way it is in Washington.

Mr. ROBINSON. In Latah County in 1910 the number of acres improved and in farms only was 213,817; in 1920, 223,026 acres, indicating a very small increase in the acreage placed under cultivation as compared with the heavy increase in the Twin Falls section under irrigation.

Practically the same results are evidenced in Yakima County, Wash., as compared with Walla Walla County, Wash. Walla Walla County is one of the wealthiest counties in the State of Washington, and its crops are quite diversified—not so much so as in Yakima County, but the figures are, if anything, more striking than in the case of the comparison between Twin Falls County and Latah County in Idaho.

In that district, likewise, the farm units in Yakima County in 1910—well, I have the figures there for 1900, which was prior to any particular irrigation development in the Yakima district.

Senator JONES. That is hardly correct. There was quite a bit of private development in Yakima County at that time, but no Government development.

Mr. ROBINSON. Yes; that is true; but the substantial development, Senator, dated, I think, after 1910 or between 1900 and 1910.

Senator JONES. Yes; the Government development commenced then. But there were quite a number of private canals. In fact, one of the large canals at Sunnyside that the Government took over was put in before 1900.

Mr. ROBINSON. The average number of acres per farm unit in Yakima County in 1900 was 419.4; in 1910, 96.1; in 1920, 83.3. The larger farm units in Yakima County are explained by the fact that there are some large farm holdings or ranches in that district which bring up the average acreage per farm unit substantially.

Senator JONES. There is practially no farming in Yakima County except by irrigation?

Mr. ROBINSON. That is correct.

Senator JONES. The other farms are largely grazing—dry farming.

Mr. ROBINSON. That is illustrative of the value of the assessed property and shows the resulting increased wealth from irrigation.

In 1900 the assessed value in Yakima County was $6,761,376; in 1910, $47,777,560; in 1920, $92,127,490.

In Walla Walla County in 1900 the assessed valuation was $13,980,317; in 1910, $39,517,589; in 1920, $64,694,404, showing a much greater increase in property wealth in the irrigated sections than prevails in the nonirrigated sections.

Senator JONES. I might say that there has been a considerable irrigation development in Walla Walla County.

Mr. ROBINSON. There is in the immediate vicinity of Walla Walla and the Touchet Valley; in WallaWalla County farm holdings and large wheat ranches of from 2,000 to 5,000 acres that are not unusual. The population of Walla Walla County has shown a decrease from 31,931 in 1910 to 27,539 in 1920, in comparison with a population in Yakima County in 1910 of 42,780, and 1920, 63,710.

Senator KENDRICK. Mr. Robinson, you have pointed out rather clearly the great advantage of irrigation in the increased population and increased wealth that comes from it in Idaho and Washington. Are you acquainted with the country along through Wyoming which your railway system traverses?

Mr. ROBINSON. Yes, Senator.

Senator KENDRICK. You know the Basin of the Green River very well?

Mr. ROBINSON. Yes.

Senator KENDRICK. You know something of its arid character, do you not?

Mr. ROBINSON. Yes.

Senator KENDRICK. Some five or six years ago an investigation of that Basin was made by the State Reclamation Department for the purpose of determining the area of irrigable lands, and this investigation showed 1,025,000 acres of irrigable lands in the Upper Green River Basin within the borders of the State of Wyoming subject to irrigation.

Do you know of any reason why that country would not under irrigation prove as productive and as satisfactory for settlement as the sections that you have referred to in Washington and Idaho?

Mr. ROBINSON. No; I do not. I think that those proven projects, Senator, are merely typical of what can be done in Wyoming.

Senator KENDRICK. And other places?

Mr. ROBINSON. And other places where water can be placed upon the arid lands.

Senator KENDRICK. You will recall that in the neighborhood of these lands there are enormous coal beds and thickly populated communities. That is to say, there are communities at present like Rock Springs, with a good many thousand people. Is it not your opinion that there would be greater advantages from irrigation in a section of that kind where the market for the products would be very close than in sections that are a long distance from the market?

Mr. ROBINSON. I should say that would be true, Senator, where cities are well established, as in the instance you cite, which would afford a substantial market for the products grown in that immediate vicinity.

Senator KENDRICK. Yes; almost contiguous to the lands to be irrigated.

Mr. ROBINSON. That is true.

Senator KENDRICK. It would offer a home market for farm products. You also know of the enormous shipments of feed for live stock into this country during severe winters, do you not?

Mr. ROBINSON. Yes, indeed.

Senator KENDRICK. In one instance I was told there was from $340,000 to $350,000 worth of feed, I think, shipped into Granger, Wyo., for live stock fed in that neighborhood, while within a radius of 30 or 40 miles from Granger there is this territory that is well adapted to irrigation, with plenty of water, provided the water is stored and conserved.

Mr. ROBINSON. Yes. Following your line of thought regarding the feed for live stock in that territory, you will recall that in 1918, during the drought period, it was necessary to ship many thousands of head of stock off to the Texas and New Mexico ranges.

Senator KENDRICK. It was necessary to ship them 1,200 to 1,500 miles away for winter.

Mr. ROBINSON. Yes; and that stock still is in large part in those southern States.

Senator KENDRICK. Yes; and the men that own it are almost bankrupt, because of the enormous expense.

Mr. ROBINSON. That is unfortunately true. As I have pointed out, the cases that I have cited are typical of what can be done, and it is so remarkable too that under irrigation there are no crop failures. With an ideal water supply there are no crop failures, and the fact that the live stock in a large part of Wyoming either had to be shipped to ranges where it was available or else marketed at a forced sale, at unprofitable prices, would not occur if irrigation were available and ample forage crops could be supplied.

Senator KENDRICK. In other words, it would stabilize the whole industry?

Mr. ROBINSON. It would have that effect; yes.

Senator KENDRICK. Have you, by accident or otherwise, visited the community of Eden Valley in this basin of the Green River, where there are from 15,000 to 20,000 acres under irrigation now?

Mr. ROBINSON. No, Senator; I have not.

Senator KENDRICK. You have not seen the wonderful farm products that they produce there?

Mr. ROBINSON. No, sir. I have visted that project that you have in the vicinity of Laramie.

Senator KENDRICK. Well, there is another north and west of Rock Springs, known as Eden Valley, of 10,000 or 15,000 acres, in the same altitude and the same soil.

In connection with that I want to ask you one more question. You know something of those great lakes that could be used for reservoir purposes in conserving the water, do you not?

Mr. ROBINSON. In the northwestern part of the State? Yes; I am familiar with that general district. There would seem to be a very ample supply of water there for all necessary purposes.

Senator KENDRICK. All of it is in the drainage of the Colorado.

Mr. ROBINSON. The intensive cultivation is well illustrated by the comparatively small farm units in irrigation projects and the decreasing number of acres in the unit holdings. It has been amply demonstrated under proven irrigation projects that from 40 to 50 acres is as much land as can be profitably farmed. The original entrymen in the south side Twin Falls district took out 90 acres. That was the average holding. That has steadily decreased, until at the present time the average holding in the Twin Falls south side district is 59 acres per unit. That requires, of course, intensive cultivation and proper care and attention. That proves, I think, that to hold beyond approximately 50 acres becomes unprofitable. It is not farmed to the same profitable extent that the smaller holding is.

Senator KENDRICK. As the size of the unit decreases the profits increase?

Mr. ROBINSON. That is correct.

Senator KENDRICK. Is it not your opinion that within the next few years we shall see the size of the units still further decreased?

Mr. ROBINSON. From what information I can gather, Senator, it seems the consensus of opinion, not only of officers of the Reclamation Service but of practical operators, that a unit of between 40 and 50 acres is the ideal size.

Senator KENDRICK. At the present time?

Mr. ROBINSON. Well, judging from their past experience that would be the case in the future. I have not had any information to the effect that less than 40 acres would be a desirable unit to operate.

Senator KENDRICK. That would depend, of course, upon the remoteness of the markets and the intensive character of the farming.

Mr. ROBINSON. Yes; that is true. It must be appreciated that 40 acres could not be profitably operated in truck gardening or intensive cultivation of that kind. That would be too large a unit, and along that line your thought is quite correct.

I am much impressed with the fact that it has been generally felt that the East has not been sympathetic with the reclamation project in the West, partly, I take it, because it is rather removed from immediate contact with them, and the eastern Representatives and Senators have not been closely observant of the substantial results that flow from the development of these western arid lands. I have mentioned the increased population of Twin Falls, which is typical of all irrigation projects—the very rapid increase in population and the creation of cities; and, of course, with that must go a demand for manufactured products.

Now, the East, essentially an industrial section, becomes interested in the population of these western lands which at the present time are sparsely populated and where there is, because of that small population, a comparatively small demand for the eastern manufactured products. The West is not a manufacturing district. Our production in the West is much less than our requirements, and will be for many years. As the population increases there is an increasing demand for the eastern products of all kinds—manufactured food products, hardware, clothing, shoes, machinery, automobiles, and all of those things that are sold and marketed in this eastern territory. Those things in turn find a demand in the West. So I contend that the East is essentially interested in irrigation in the reclamation of these arid lands for the market that it will afford and the things that they will buy.

The Reclamation Record of February 19, 1920, contains some very interesting figures along that very line. Without attempting to cite all that is quoted in this publication, which it seems to me is particularly valuable, because it is the Government's own record of the project, the Minidoka project in southern Idaho, that gives the value of crops produced on this project in 1919 at $5,924,000, while the value of the purchases of manufacturers, which are listed in detail, was $7,139,000 during that year. The value of outside purchases and materials shipped in was in excess of the value of the crops produced on the project.

Senator KENDRICK. It also shows the interest of the eastern part of the United States is involved in this reclamation?

Mr. ROBINSON. Essentially so. And this list includes everything, drygoods, clothing, shoes, automobiles, trucks, groceries, hardware, coal, feed , flour, bags, farm implements, machinery and supplies, electrical supplies, jewelry and miscellaneous instruments, drugs, cigars, furniture, and other merchandise—in large part, with the possible exception of the coal and the lumber, all products of eastern manufacture.

Also there has been at times possibly some opposition in the minds of the farmers and producers in the Middle Western States—Missouri, Kansas, Iowa, Nebraska, and Illinois, that the reclamation of these arid lands will tend to produce crops which they are very largely producing at the present time in excess of their requirements and that it will compete with their production. I think it would be interesting to go over a list of the essential crops that are raised on these irrigated lands.

Sugar beets, an essential crop in this western territory, displace no crop of that kind raised in the United States. It adds an essential food product, which is in large part imported from foreign countries. Sugar beets, outside of the northern peninsula of Michigan, are produced only on irrigated soils. Last year, the heaviest beet production in the United States, there were approximately 12,000,000 bags of sugar produced in the States of Colorado, Idaho, Utah, Montana, and northwestern Nebraska.

Senator KENDRICK. And do not forget Wyoming.

Mr. ROBINSON. And Wyoming, sir; you have three factories in Wyoming. All of the lands under these irrigation projects are susceptible of beet production, and the extent to which beet-sugar production can be increased will keep a substantial amount of money at home.

Alfalfa, while it is produced in large volume in that territory, is used in large part for feeding stock and finds a market for the surplus at the Missouri River and east only when there is a shortage of forage crops in that territory. It supplies a substantial feed for the dairying States under those conditions, and as in the past there was this spring quite a volume of alfalfa hay from Idaho moved to the southeastern States—to Memphis and that territory.

Senator KENDRICK. Much more would have been moved if they had had cheaper freight rates.

Mr. ROBINSON. I rather doubt that, Senator, this year. In December, because of the condition prevailing in Idaho and the great surplus that they had, we undertook to make an emergency rate which became effective December 24 and expired April 30, which period was stated by the producers and the Department of Agriculture and the governor, with whom we conferred, to be a period that would enable them to move this surplus. An accurate check of the actual shipments indicated that there was slightly less than 1,000 carloads of hay moved to the Missouri River and east during that emergency period under the reduced rates. That is accounted for by the great surplus of forage crops that were raised in the States to the east of Idaho—Kansas and Nebraska—and the enormous corn crop that was raised which was available for feed at substantially reduced prices under those that had been prevailing.

So there was clearly a case of competition of one forage crop with another produced nearer the point of consumption.

Senator KENDRICK. Yes; but under normal conditions, Mr. Robinson, there is a demand for the alfalfa, or lucerne, for use in the manufacture of alfalfa meal for dairy products, which product hardly has a substitute on the market. There is a great deal of it consumed by the dairy interests in preference to any other form of feed.

Mr. ROBINSON. That is true. It would be of interest, I think, to say that we had many conferences with the prepared feed manufacturers this year since the 1st of January. They were contending that the rate of transportation should be reduced, because of the competition that they found with the grains and the native grasses that were produced. They themselves, with their prepared feeds, involving the refuse of beet sirup and the ground alfalfa to which you have referred, were in keen competition, and because of the cheapness of the corn and oats in the Mississippi Valley and the Missouri River territory, had great difficulty in finding a market for their prepared feeds.

Senator KENDRICK. Well, it is your contention anyhow that the West, under irrigation, does not become a competitor of the East?

Mr. ROBINSON. I contend that, Senator, and it offers an additional supply which is never failing under irrigation when there is a condition of drought prevailing in other territories.

As to wheat, there is a substantial production of wheat in that territory, which is largely exported via Pacific ports from the States of Oregon and Washington and via the Gulf ports from Idaho and Utah. A substantial portion of it is ground into soft wheat flour, which finds a favorable market in the southeastern States—hot biscuit flour and hot bread flour. In that regard, it does not compete in that territory with the hard wheat flour of the eastern States—Minnesota, Kansas, and Iowa.

Senator JONES. Does very much of the irrigated land produce wheat, anyway?

Mr. ROBINSON. I should say it does not.

Senator JONES. I know it does not in Washington.

Mr. ROBINSON. It does to a somewhat greater extent in Idaho.

Senator JONES. Probably so, but the more developed the irrigation becomes, I take it, the less wheat would be raised on irrigated lands; it would go to more remunerative crops.

Mr. ROBINSON. Yes; that is true.

The potato production in those States is very substantial, but, surprisingly, the potato production in those States does not compete in large part with the potato production in the Middle West. They find their most profitable market and largest market in the southern States. The southern States produce early potatoes—Texas, Louisiana, Arkansas, and Oklahoma—which are marketed in the North in the early months, beginning with June. Likewise, California raises early potatoes and markets them in the North. The South does not raise potatoes that have good winter keeping qualities.

There is so much moisture, such a rapid growth, that they will not carry through the winter and store well. So they in turn look to the North for their winter potatoes; Idaho, raising approximately 10,000 carloads of potatoes annually, markets 75 per cent of those potatoes in the States of Texas, Arkansas, Oklahoma, and California. Likewise, Oregon and Washington find their most profitable markets in that territory. Those potatoes never move east of the Missouri River except under most abnormal conditions, when the price will enable them to market profitably in competition with potatoes grown in the nearer States—Minnesota and Wisconsin.

Senator WALSH of Montana. I was curious to know, sir, how far east potatoes grown in the mountain region go.

Mr. ROBINSON. Seldom to points east of the Missouri River, Senator Walsh.

Senator WALSH of Montana. Under any circumstances?

Mr. ROBINSON. Except under abnormal price conditions.

Senator WALSH of Montana. East of the Missouri River points?

Mr. ROBINSON. East of the Missouri River points; yes, sir.

Senator WALSH of Montana. That would be Kansas City and Omaha?

Mr. ROBINSON. On the Missouri River, from Sioux City to Kansas City; they will market along in there in greater or less volume.

Senator WALSH of Montana. Well, take the potatoes farther east; take them in the Missouri River Valley. How far east do they go?

Mr. ROBINSON. They generally supply the St. Louis and Chicago territory—those cities in the Mississippi Valley.

Senator WALSH of Montana. Do they ever get to the Atlantic seaboard?

Mr. ROBINSON. Very seldom.

Senator WALSH of Montana. What do you know about potatoes grown on the Atlantic seaboard or imported? How far west do they go?

Mr. ROBINSON. I doubt if they get very far west of the Atlantic ports.

Senator WALSH of Montana. Take potatoes coming in from Bermuda. How far west do they go?

Mr. ROBINSON. Oh, the Bermuda potato is an early potato. They find a market quite generally throughout this eastern territory.

Senator WALSH of Montana. They come at a season when they do not compete with the potatoes of the Mississippi Valley or the Mountain States at all?

Mr. ROBINSON. That is correct.

Senator WALSH of Montana. We used to import potatoes from Germany and Ireland. How far west did they go?

Mr. ROBINSON. I do not believe that those imported potatoes find any market west of the immediate territory adjacent to the Atlantic seaboard. This past winter, under the more favorable rate of exchange, there were approximately 2,000,000 bags of potatoes imported into this country from Denmark, in the face of a potato production 72,000,000 bushels in excess of the year before in the United States, with Minnesota, Wisconsin, and Idaho having great difficulty in finding a market for their potatoes or to get a price for them that would even cover the cost of digging them from the ground. But those potatoes imported from Denmark did not go west of the Atlantic seaboard cities; they were very largely consumed in New York, Philadelphia, and Baltimore, and some in Boston.

Senator WALSH of Montana. And apparently at the same time they were not able to supply themselves from the Minnesota and Wisconsin fields?

Mr. ROBINSON. Yes.

Senator WALSH of Montana. And that by reason of freight rates, I suppose?

Mr. ROBINSON. No; because of market conditions—wholly because of market conditions. Last year the State of New York alone was the largest potato-producing State in the Union, with 46,000,000 bushels. Minnesota and Wisconsin, with a combined production, had about 62,000,000 bushels.

Senator SHORTRIDGE. How many bushels did you say were imported from Denmark?

Mr. ROBINSON. About 2,000,000 bags, a bag representing about 100 pounds.

You have just mentioned the question of the freight rate. The freight rate has had very little to do with the relative movement of potatoes during the past season—there was such an enormous production in the United States, over 72,000,000 bushels increase over the previous year. That was wholly a question of supply and demand, not a question of transportation costs.

Peculiarly, the Idaho potatoes—I had a conference in Pocatello on December 20. At that time they had on hand in Idaho about 5,000 carloads yet to move. The growers felt they were utterly ruined, that they could not find a market for those potatoes, and urged a reduction in the rate. An investigation of the situation convinced us that a reduction in the rate would not enable them to find a single additional market for their potatoes. There was no demand for them. That is, there was no demand for Idaho potatoes because of the great production in the United States at every place where potatoes were grown.

Senator WALSH of Montana. Was that abundance reflected in a decreased price?

Mr. ROBINSON. Yes. Their price f. o. b. cars in sacks at Idaho shipping places at that time was 70 cents per sack of 100 pounds, about 40 cents a bushel. There later developed a substantial demand in California for potatoes, so that the price advanced for Idaho potatoes from 70 cents on the 1st of January to $1.10 a hundred in Idaho the 1st of March, and all of those growers who had a surplus of potatoes out there found a market which enabled them to dispose of their goods approximately on the basis of their cost of production. They made no particular profit, but they were saved from a complete loss. On the other hand, Minnesota and Wisconsin to-day have a tremendous carry over. They could not find a market for their potatoes. But Idaho, Washington, and Oregon disposed of their entire crop at a price which did not represent any particular loss.

Senator KENDRICK. So that in the main the crops of the West either are consumed in the West or go to the South?

Mr. ROBINSON. That is correct.

Senator WALSH of Montana. Let me make this inquiry of you, sir. How do you ship potatoes from Idaho in the month of December?

Mr. ROBINSON. They are shipped in refrigerator cars—insulated cars.

Senator WALSH of Montana. Do you use any method of heating the cars?

Mr. ROBINSON. The cars are lined, and in some instances, in severely cold weather, there are stoves placed in the cars.

Senator WALSH of Montana. Charcoal stoves?

Mr. ROBINSON. No; they may be oil heaters, or they may be coal stoves with a pipe running out of the side of the car.

Senator WALSH of Montana. But ordinarily the insulated refrigerator car will meet the requirements?

Mr. ROBINSON. With a bedding of straw; yes.

Senator WALSH of Montana. How much does that add to the transportation cost?

Mr. ROBINSON. Very little; and there is an allowance made.

Senator WALSH of Montana. Let us take your summer rate. Suppose you ship the 1st of May. Have you a summer rate and a winter rate?

Mr. ROBINSON. Not on potatoes; no, sir.

Senator WALSH of Montana. It is the same thing?

Mr. ROBINSON. The rate is the same; yes, regardless of the period of the year.

Senator WALSH of Montana. Do you guarantee their delivery without injury by frost?

Mr. ROBINSON. Not in the winter. Perishables are shipped either at the risk of the shipper or at the carrier's risk at some added cost. To that extent during the wintertime if the shipper elects to pay for the carrier's protection, then there is an added cost of transportation.

Senator WALSH of Montana. That is what I mean. In some way or other the shipper pays an added cost for transportation in the wintertime, either directly to the railroad company or by way of insurance?

Mr. ROBINSON. That is true, yes. When I answered your first question, Senator, I had in mind the charge for transportation and not the charge made for accessorial service.

Senator WALSH of Montana. Do you know how much that amounts to per bushel?

Mr. ROBINSON. To the Missouri River the charge is $25 per car. There are approximately 700 bushels to a car, which makes it about 3 cents a bushel.

Senator WALSH of Montana. That is the insurance?

Mr. ROBINSON. Yes, sir.

Senator WALSH of Montana. Three and a half cents a bushel?

Mr. ROBINSON. Yes, sir; something like that.

Senator WALSH of Montana. Can you give us about the aggregate amount shipped from that territory to Missouri River points?

Mr. ROBINSON. Unfortunately I have not those figures segregated as to destinations. I would be very glad to supply the committee with that, if you would like to have the data.

Senator WALSH of Montana. It will perhaps not be necessary.

Mr. ROBINSON. Continuing on the question of the essential crops produced: While apples are produced in fairly substantial volume, the amount is relatively very small—that is, the tonnage compared with other crops produced on irrigated lands. But again, the apples of that western production do not directly compete with the apples

of eastern production. They go in large part to the States of Minnesota, Wisconsin, North Dakota, South Dakota, Illinois, and Iowa, which are not fruit producing States. Those that come east are a table apple, largely extra fancy; they find a market on the fruit stands, and it seems to me, can not be regarded as competing with or particularly displacing the apples of the Eastern States, in which States the total volume is much in excess of that produced in the West.

Dried fruits, such as prunes, peaches, and apricots, are essentially western products and do not compete with eastern products.

Senator ODDIE. Let me ask you one question in regard to apples. Do you not think that the tremendous advertising given the Oregon apple has increased the demand for apples all over the country and made a larger market for apples raised in the East?

Mr. ROBINSON. I should say so, yes. Not only, Senator, has it done that but the care that is given to the orchards in the West in the way of protection of fruit trees, picking, packing, and crating has stimulated the eastern producer to put up a much better grade of apples and other fruit than he used to put up.

One other essential crop that is raised is seed—alfalfa, clover, vetch, and beet seed. The last is not essentially a seed that is in large demand in the East, but the first named are, and are required in large part by the farmers of these eastern districts for replacing the nitrogen in the soil by a leguminous crop, which these grasses afford. In that territory and under the irrigation conditions and climatic conditions under which they are grown, the quality of those seeds is prime. It is a most excellent quality, and they are in great demand not only in the Mississippi Valley but in these eastern farming districts, and nowhere are better quality seeds of those kinds produced than in the western irrigated districts.

Senator KENDRICK. Mr. Robinson, is it not true that the great seed houses of the East are now dependent to a very great extent upon even the garden seeds produced in the West?

Mr. ROBINSON. That is true.

Senator SHORTRIDGE. Particularly in California?

Mr. ROBINSON. Yes; in California.

Senator WALSH of Montana. Is that true of peas?

Mr. ROBINSON. I did not mention peas particularly, Senator, but the pea-seed production of Idaho is showing very great increase in the markets throughout all this eastern territory.

Senator WALSH of Montana. It is a large interest in parts of my State.

Senator SHORTRIDGE. I should like to have it appear in the record that we raise apples in California, Mr. Chairman.

Senator ODDIE. And we also in Nevada.

Mr. ROBINSON. The live-stock production of the Western States should be given consideration——

Senator WALSH of Montana. Before you pass from that subject, can you tell us about beet seed?

Mr. ROBINSON. The beet-seed industry is being developed by the sugar factories, very largely as a result of necessity. They have heretofore looked to Germany and Russia for their beet seed, but they are developing their beet seed and a very satisfactory quality of it,

and in the next three to five years they expect that they will be entirely free from the necessity of foreign production of beet seed.

Senator WALSH of Montana. Can you tell us where the seed is being cultivated?

Mr. ROBINSON. In northern Colorado the Great Western Sugar Co. are developing their beet-seed fields. The Amalgamated and Utah-Idaho sugar companies are developing theirs in Utah and in southern Idaho. There may be some in Montana: I am not sure about that, but I have knowledge of these other conditions.

Senator SHORTRIDGE. You might add also in California, around about Salinas, King City, Spreckels, Oxnard, in Ventura County, and latterly around about Manteca in San Joaquin County.

Senator WALSH of Montana. Why is that seed that is grown in the Western States, and particularly in the Mountain States, superior to that which they could raise in Wisconsin and Michigan, for instance, where they cultivate the sugar beet?

Mr. ROBINSON. You are referring to beet seed now?

Senator WALSH of Montana. Yes, sir.

Mr. ROBINSON. My understanding of that is that it is grown under the direct supervision of the agriculturists of the sugar companies.

Senator WALSH of Montana. But they have extensive factories and fields in Wisconsin and Minnesota and in Michigan as well. Why should not those companies grow their own seed, or grow seed for the beet growers in their immediate vicinity. Why do they go West to get seed?

Mr. ROBINSON. I do not know that they do go West to get their seed now.

Senator WALSH of Montana. I understood you to say that the sugar-beet seed was one of the seeds that moved from the irrigated districts of the West to the Mississippi Valley.

Mr. ROBINSON. I think perhaps, Senator, I did not make myself clear on that point. I spoke particularly of the large production of alfalfa, clover, and grass seeds which find a substantial market in this territory.

Senator WALSH of Montana. Well, let me ask the same with reference to those. Why is it that the Mississippi Valley regions look to the irrigated regions of the West for these high-quality seeds—prime, as you speak of them?

Mr. ROBINSON. I think that is because of the necessity of finding seed that is grown in another locality, for strength and fertility. It is necessary to change seeds. Potato seed must in time be secured from other localities, instead of replanting or using continuously the potatoes raised in one locality. And the seeds raised in that territory under irrigation with an adequate water supply at all times, with an ample supply of sunshine at all times, and with the quality of the volcanic ash of the soil under those irrigation projects, seems to be the quality of seed that is very greatly desired and of substantial strength and fertility.

Senator SHORTRIDGE. With an increase in saccharin content, is that the idea?

Mr. ROBINSON. You are speaking of beets?I was talking of seeds generally.

Senator SHORTRIDGE. I beg your pardon; I thought you were limiting it to beet seeds.

Mr. ROBINSON. Unfortunately, the growth and development of the beet-seed industry is largely in its infancy. It is largely in an experimental stage with these sugar companies, who have been forced to grow their seeds much nearer home so that they will not need to be dependent on these unstable foreign supplies. During the war it was practically impossible for them to secure seeds from those foreign countries.

Senator JONES. Can they raise just as good seed in this country as in those foreign countries?

Mr. ROBINSON. They tell me so; yes.

Senator ODDIE. Have you any statistics to show how much Germany imported into this country before the war?

Mr. ROBINSON. Of all seed?

Senator ODDIE. Yes.

Mr. ROBINSON. I have no figures as to the tonnage, but the entire beet seed requirements were secured from those countries. All of the beet seed was imported.

Senator WALSH of Montana. I think those who are not informed about it should be advised that the sugar-beet seed is a very highly developed product. It takes about four generations before the seed can be placed upon the market at all. The seed is planted—the plant is a biennial, as everybody knows. The seed is planted and grows up into a beet. Then the beets in a certain field are tested for the saccharin matter that they contain, and only those beets which contain a very high percentage of saccharine matter are retained for the purpose of planting again. They are planted the next year—that is, only those that pass a very high test. Those seeds are planted and produce a beet which is planted the next year, if it passes that high test. And thus they continue until in that way, by a process of selection, the seed which is produced by the fourth generation is placed upon the market. So it requires a very careful selection and an amount of attention to details and cultivation that would not ordinarily be given in this country by the gardener, not to speak of the farmer.

Mr. ROBINSON. Mr. Chairman, with your permission—not with any desire to burden the record—there is one point I would like to make clear, and that is in connection with the rail transportation which is so essential to any irrigation project.

The projects as developed are generally not immediately adjacent to existing rail transportation, and of course to make them successful rail transportation is necessary. The carriers as a whole and private capital as represented in transportation companies would be glad to undertake, as they have done in the past, the construction of the necessary rail facilities to serve these projects. But in justification of that it is extremely essential—and I would like to impress upon the members of the committee, not only in justification of the necessary railroad transportation, but to those who settle upon these lands, the necessity of continuing appropriations in order that the work may be carried along to a finish.

We have one instance in northwestern Nebraska and southeastern Wyoming—the Fort Laramie project. We have filed under the present act the certificate of necessity which is required; we have justified that both before the interstate and the State commissions of Nebraska and Wyoming, and we find that while we are ready and

prepared to go ahead immediately with the construction of this same 40-mile extension of the Goshen Hole section, that project is but partially completed, because of the lack of continuing appropriations; and while our investment will not be a failure, the returns upon that investment will not be forthcoming until the completion of the program under that project. So it is extremely desirable to have that provision in this bill that contemplates over a period of years a continuing appropriation to insure the completion of a project when started.

Senator KENDRICK. In other words, it would coordinate the development of transportation and settlement and bring it all along together?

Mr. ROBINSON. Exactly.

Senator KENDRICK. Mr. Robinson, in connection with that, suppose we were to initiate the development of that enormous project north and west of Rock Springs and require the assistance of the railway lines in the way of transportation, would it not be possible for the Union Pacific to extend a branch into that country for the purpose of promoting the development of that country, provided the conditions surrounding the extension were made favorable? As an illustration, suppose you were not required to do anything but just serve that purpose of development and are not required to carry on anything like a regular service without regard to whether it paid or not. If the transportation were required you could afford to build into that territory in advance to serve that particular project, could you not?

Mr. ROBINSON. Will you allow me to state that in my own way, Senator, to see if I have your meaning?

Senator KENDRICK. Yes.

Mr. ROBINSON. If I understand you correctly, assuming this project lying north and west of Rock Springs is developed to a point where the Reclamation Service say that this is a feasible project and give it their approval and appropriations, if you please, may have been made to develop it; then under those conditions, would the Union Pacific extend its lines to cover that territory as a promoting measure? Is that the thought you have in mind?

Senator KENDRICK. Yes.

Mr. ROBINSON. I should say that we would.

Senator KENDRICK. With the understanding that there would not be any arbitrary demands made upon the road to give a service that was not actually required—that is to say, a daily service or that sort of thing. Suppose they just extend the road to meet the needs of the development——

Mr. ROBINSON. I understand.

Senator KENDRICK. It would be not only practicable to make that kind of extension into the sparsely settled country, but it would in the end prove profitable to the road and to the community as well?

Mr. ROBINSON. Yes, indeed. I would answer your question there out of our experience in the past. In Twin Falls and other irrigation sections where projects have been developed we have extended our lines, and the assurance of the development of that section, containing 400 acres of known and proven irrigable lands, would be complete justification of the expenditure of the necessary moneys to

provide rail transportation into it. I should say that there would be no hesitancy on the part of the Union Pacific about extending its rails to serve such a territory.

Senator KENDRICK. I have occasion to know that the chairman of your board of directors has proceeded throughout his entire railway experience on the principle that the good will of the community served is one of the best assets of a railroad, and the Union Pacific has lived up to that in a large way in its dealings with the people of my State. There is no doubt about that. And you are certain that if we initiated these projects we could get these extensions to help out in the development?

Mr. ROBINSON. I am confident of that, Senator.

The CHAIRMAN. Your statement has been very interesting, Mr. Robinson, and we thank you exceedingly.

Mr. ROBINSON. I am very glad to have been able to be with you.

The CHAIRMAN. Mr. Davis, will you take the stand, please?

STATEMENT OF HON. ARTHUR P. DAVIS, DIRECTOR OF RECLAMATION SERVICE, DEPARTMENT OF THE INTERIOR.

The CHAIRMAN. Mr. Davis, you have recently been out into the West and through those States where irrigation is practiced?

Mr. DAVIS. Yes, sir.

The CHAIRMAN. The committee has been considering Senate bill 536. We are about through the hearings and we are happy to have you here. You may state to the committee in your own way whatever you desire.

Mr. DAVIS. The bill to which you refer, Mr. Chairman, is designed, as I take it, as an extension or continuation, with some modification, of the policy that was inaugurated by the United States in 1902 by the passage of what is known as the reclamation act. That has since been modified by numerous other acts amending, expanding, and qualifying the original, and the sum total of all these acts we usually refer to as the reclamation law.

The original act was passed in June, 1902, and provided for the segregation into a fund in the Treasury, called the reclamation fund, of the receipts from the sales of public lands in the arid States to which the act applied. The act was unique in many respects and in some respects experimental. It gave large powers to the Secretary of the Interior in the expenditure of the receipts entering the reclamation fund, and was unique in requiring the return from the beneficiaries of the moneys invested in these public works. It provided for the investigation and construction of irrigation works in those Western States. In some respects the powers at first granted were inadequate and were afterwards expanded by amendments and additions to the law, providing in some cases greater powers, in some cases restricting those powers.

In 1914, after the act had been in force for 12 years, the law was changed to the effect that the Secretary no longer had power to expend the moneys, except under annual estimates submitted to Congress and approved by Congress. In other words, the money must be appropriated. So that there are now two independent limitations upon expenditures, first, appropriation by Congress, and, second, the existence of the moneys in the reclamation fund. Some years

one limitation rules, and in other years the other limitation rules. The net cost of the work to the end of the past fiscal year was approximately $122,000,000.

By means of those expenditures the United States has constructed irrigation works, including canal systems and, usually, storage works capable of serving 1,675,000 acres of land, in round numbers.

In addition to that, over 1,000,000 other acres have been benefited. Reservoirs have been constructed from which, under one of these amending acts that I have referred to, the Government can sell storage water to existing canal systems or irrigation districts or any consumer where the water supply is inadequate. There are a large number of such systems in the West, where the system has been developed to such an extent that in the low years, and somewhat in the latter part of all irrigating seasons, the water supply is inadequate.

Some of those communities have been fairly prosperous, with a partial water supply by which they can raise one or two crops of alfalfa in the early part of the season, and grain and such products; but their production is greatly increased in most cases by the sale of storage water from Government works to complete the water supply. And under what is known as the Warren Act such supplementary water supplies have been sold to more than a million acres of land. So that altogether about 2,750,000 acres of land are served, either wholly or partially, from these Government works that I have referred to. On the projects that the Government has constructed and which it serves in full about 75 per cent of the land which is covered by ditches is under irrigation, and of that under irrigation something like 98 per cent was actually cropped last year; the difference between the irrigated and the cropped areas being areas in orchards not yet bearing and young alfalfa not yet ready to crop, usually. There are some minor differences, where crops, on account of insects or otherwise, were not worth harvesting, perhaps. Once in a while a small area of water-logged land is not harvested, although perhaps irrigated in the early part of the season.

Senator JONES. Will you tell me why this 25 per cent does not avail itself of water?

Mr. DAVIS. There is about 25 per cent of land under ditch that was not irrigated in 1920. That consists mainly of portions of farms which are under irrigation but which have not yet been fully developed, owing to lack of means and of time by the settlers. A portion of that will never be cropped or irrigated, because it is occupied by farm buildings and roads and ditches and so on, which are charged for the irrigation but are not included in the acreage reported by the farmer as being cropped, of course, because they are not cropped.

Then there are some minor areas of public land that has been opened to entry and not taken that constitutes a portion of that 25 per cent. There is very little of that. There is some private land which is owned by nonresidents, to whom the law does not permit us to deliver water until they become residents, and some areas in farms or holdings of larger than 160 acres. There is a limitation in the law that water shall not be delivered or a right sold to more than 160 acres in one ownership, and there are some areas that have not yet complied with that provision of the law.

All of these various cases compose about 25 per cent of the area that is under it and is not irrigated, but, as already stated, the bulk of the difference is on the irrigated farms; that is, it is settled and in process of development or is used in various ways incidental to irrigation. It does not show any lack of demand for the irrigable land; on the contrary, the demand is strong.

Senator WALSH of Montana. Before you pass from that subject I wish you would make it clear what character of work is required on the part of the settler, so that he may actually avail himself of the water from the ditches after they are constructed.

Mr. DAVIS. There are many things that the farmer must do for himself under the present law. Besides providing ordinary improvements, buildings, fences, machinery, and the live-stock equipment necessary to farm, he must build his farm laterals adequate to take water from the Government lateral canals. He must in many cases clear the land of the natural desert growth, sage brush in some instances, mesquite in others, or brush of various kinds, and in all cases must break the virgin sod or soil.

Senator KENDRICK. Pardon me, Mr. Director; I want to ask you a question there if I may. Does the farmer under the Government project have the assistance of the advice or direction of a Government engineer in laying out his laterals?

Mr. DAVIS. There are not many cases where that kind of advice is given, but there are some. There is no law against it; there is no law providing for it.

Senator KENDRICK. The Government does not survey his laterals?

Mr. DAVIS. No, sir; not unless he pays for it. In some cases they request surveys and they can be carried out if he pays for them.

Senator WALSH of Montana. Is there any leveling required?

Mr. DAVIS. In most cases leveling is required to adapt the areas to irrigation. In some cases that is a very heavy tax on the farmer's resources and is one of the chief reasons why a substantial amount of the area that is included in the farms that are irrigated is not developed. The cost of leveling and clearing is sometimes very heavy. In most cases it is a considerable item.

Senator JONES. Can you not state what that cost is in dollars and cents, so as to give us a better idea?

Mr. DAVIS. The variation is very wide, going from almost nothing on some very smooth valleys to, I should say, about $100 an acre. There are few cases that go above that, but a number go as high as $100 an acre, and I should say the average would be in the neighborhood of $30 or $40.

The CHAIRMAN. You are not including the water right?

Mr. DAVIS. Not including any water charge.

Senator SHORTRIDGE. Just including the clearing and leveling of the land?

Mr. DAVIS. Just including the clearing and leveling of the land. In some few cases the clearing is a heavy item.

Senator WALSH of Montana. And constructing the farm laterals, too?

Mr. DAVIS. No; that I did not include, because that is usually a nearly constant sum and will not usually exceed $5 or $10 an acre, because that will generally be made by his own teams and machinery in a short time.

Senator WALSH of Montana. So you would say that even when the farmer gets his water he is subject to an additional expense of from $30 to $40 an acre in order to put his land in shape so as to make use of it?

Mr. DAVIS. Yes, sir; that is on the average. There are some valleys where that charge is light. And there are other places where, as I have said, it is very heavy, and I speak of $30 or $40 as being the average. It is a very difficult thing to state with any exactness because it is difficult to get accurate costs. The farmers do not generally keep cost records, and it can only be estimated from the best information available, There are a few cases, typical of the different conditions, that enable us to make the estimates that I have just given.

In the areas which the Government irrigates directly and in which the Government operates the systems we have, of course, an operating force. In the latter part of the season, the requirements for water are lighter than they are earlier, but it is still necessary to keep the force on the land, and we have a force there acquainted personally with every farmer, delivering water to him periodically, and acquainted with the character of the crops that he raises, how much water he takes, and everything of that kind. This force being necessarily on the land to operate these ditches, can very conveniently and cheaply take, and do annually take, a census of what is produced on that project. This census is confined to vegetable products, and is reduced to dollars and cents on the basis of the market values of these products.

We do not include animal production. That generally is fed from the produce of the land, which would be counted twice, and if an estimate is made of the profit on the animals fed it delays the result because that information sometimes is not available until a year or two after—we do not know what price the animal is going to bring until sold. In the second place, it would introduce a large element of estimate of how much that profit is due to the farm itself and so on. So we exclude any allowance for estimates for animal production. On the basis of the vegetable products, the production of these reclamation projects since the delivery of water about 10 or 15 years ago, has been, in round numbers, about $400,000,000.

Senator KENDRICK. How much has it been in comparison with the original cost of the project?

Mr. DAVIS. Somewhat over three times as much as the construction cost of the project. Of course to that we must add the operating costs which the farmer has paid currently; but the construction cost which has depleted the reclamation fund is less than one-third of its total production. In the one year of 1919, which was the peak year of prices for products, the total production on all of these projects, inclusive of those served with a partial water supply under the Warren act, was something in the neighborhood of $150,000,000, or substantially more than the total cost of the construction of the projects. In 1920 our figures are not quite complete, but the acreage production is less than it was in 1919, though larger than any previous year.

Senator KENDRICK. In any event, is it not fair to assume that there has been taken out of these projects in net profit two dollars to one spent or invested in the original construction?

Mr. DAVIS. No; I would not say that, Senator. The production I am speaking of is gross; I think much less than half of that gross production is net profit. Of course the farmer's labor and the expense of production is a large part of that——

Senator KENDRICK. Of course there is the farmer's living also that enters into the part of the net profit that is not included in the summing up?

Mr. DAVIS. Yes. Whatever he consumes of vegetable products raised on the farm is included, but not meat, dairy products, honey, etc., nor anything on account of his use of the farm as a home.

Senator SHORTRIDGE. Then may I ask this question? How much has the project cost the Government, in round figures?

Mr. DAVIS. The net construction cost is approximately $122,000,000 up to date. A portion of that has been returned in construction charges to the Government. That is, the projects have been gradually paying back under the law.

Senator SHORTRIDGE. What I mean is this: What has been the sum total of the cost for construction and maintenance up to date, including all incidental expenses?

Mr. DAVIS. You mean net?

Senator SHORTRIDGE. No; the gross cost to the Government, if you can give us the figures? And on the other hand, what have been the gross output within the irrigated territory?

Mr. DAVIS. As a rough estimate I will say that the gross production has been twice the gross expenditure for operation, maintenance, and construction.

Senator SHORTRIDGE. And what those two sums are——

Mr. DAVIS. Roughly $160,000,000 and $400,000,000, subject to correction. We have published those figures in our annual report. You understand, of course that the total cost is to be repaid and is being gradually repaid to the United States, except a few per cent.

The going projects aggregate 25 in 15 States. A few of them are practically complete, perhaps a third. Nearly all of them are susceptible of some extension, and some of them very important extensions.

Senator KENDRICK. Right there I would like to ask you if it is the policy of the department to deliver these projects over to the control of the settlers as rapidly as possible?

Mr. DAVIS. Yes, sir; wherever it is feasible to segregate a unit of a project or make an entire project in complete form so that the Government may properly do so, under a provision of the law of 1914 they are turned over for the operation and maintenance of the irrigators themselves, under some proper organization, provided they so desire; and it is the desire of the department and the policy heretofore pursued to do that as quickly as conditions will permit.

Senator WALSH of Montana. What projects have you thus returned?

Mr. DAVIS. The Salt River project in Arizona, under a contract providing for the return of payments and its proper maintenance has been turned over to the Water Users' Association of Salt River Valley at Phoenix.

On the Minidoka project in Idaho, the gravity portion, a little more than one-half of the total area, is similarly placed in the hands

of an irrigation district which has been formed there and which operates the project under contract with the Secretary of the Interior.

Senator KENDRICK. Is it not desirable for the department to be relieved of the responsibility as soon as possible?

Mr. DAVIS. Yes, sir; that is the policy and has been the policy from the first.

Senator JONES. Do you find the people anxious to take it over?

Mr. DAVIS. In some cases they are willing to do so; in some cases not. In the case of the Salt River project they were after some concessions there, and the Secretary of the Interior made it a condition, if he granted the condition, they would take it over and operate it. They had previously voted down such a proposition by a large majority, but upon making that condition they took it over and have succeeded in the operation.

It has been suggested to many of the districts and associations that they take over the systems and operate them wherever they are in shape to be turned over by the Government, but only those I speak of have done so.

The case of the King Hill project is typical of a certain class of projects which we have taken up under stress of great need on the part of the irrigators. There have been a number of projects which have been built by private enterprise in which usually the works have to a certain extent decayed or been inadequate and where the reconstruction of the works is necessary, and they are incapable of carrying it out themselves. Under such conditions the Reclamation Service has taken over a number of projects. The King Hill project is one that is typical of that class. That is in Idaho, on Snake River.

In taking up that project it was made a condition by the Secretary of the Interior that the United States should not operate it; that they should continue the operation at their own expense and with their own management, and the United States would be concerned only in construction. But this year their difficulties have been so great, that having seen the Government operation of other projects in the same State, they have petitioned the Secretary to operate this project. We have the construction force there rebuilding a large portion of it, and there are some economies in having only one force and one administration there; so the Secretary has agreed to do that for this year, but in his contract he reserves the right to turn it back to them at the end of the year if he so desires.

The CHAIRMAN. Have you read the provisions of this bill, Mr. Davis?

Mr. DAVIS. Yes, sir.

The CHAIRMAN. Do you desire to comment upon the measures and give us your judgment concerning its provisions?

Mr. DAVIS. I have some comment; yes, sir. You have a report from the Secretary of the Interior, I believe, which I have also read and with which I agree, making some suggestions concerning arrangement and wording, mostly without changing the meaning. I have one suggestion, based upon the experience of the Reclamation Service. It should not be forgotten that the development of irrigation in the past, as carried out by private enterprise, and largely by corporate and district enterprise also, has, as was natural and proper,

selected projects most easily constructed, those that could be constructed most quickly and cheaply, and where the land gives promise of immediate returns. That was due to necessity under the physical conditions.

The policy of reclamation as taken up by the United States was largely based upon the difficulty of any further large development, by private enterprise, because the construction of projects remaining yet to be constructed, which was very large, involved such difficulties and such a long time in construction and settlement that it was unattractive to private enterprise. Where such projects had been attempted they were usually unprofitable and it became very difficult to enlist capital in them. The Government construction was taken up for that purpose, because it was recognized as a public benefit and one deserving of public encouragement. To a certain extent that had been previously recognized in the passage of the Carey law, and in the passage of the desert-land law and others. Those facts borne in mind, together with the experience of the Reclamation Service, indicate that the greater losses have been after the works are constructed.

(At this point the hearing was suspended for a few minutes to permit the members of the committee to respond to a roll call in the Senate.)

The CHAIRMAN. The committee will come to order. Mr. Davis, you were discussing the bill generally. Will you please continue your testimony?

Mr. DAVIS. The original reclamation act provided for the repayment of the construction cost in 10 annual installments, and in most cases that was assessed by the Secretary in equal installments, although there was nothing in the law to require that. It was found that the collection of 10 per cent of the construction cost per annum from the start was a severe burden upon many of the settlers, and probably the majority would have failed if that had been insisted upon. Some of them did fail in the attempt.

In 1914, after years of trial of the original act, that was changed by Congress to spread the payments over 20 years and to make the initial payments of the first four years 2 per cent of the total construction cost, for the next two years 4 per cent, and thereafter 6 per cent for the following 14 years, making 100 per cent in all.

Experience has shown, in my opinion, that this is entirely practicable as a scale of payment and that by some adjustment of that kind, by which the charges will be less at first until the farmer can get his land in paying condition and the proper improvements and implements on the land, the charges should be kept small, and if at the end of six or seven years they are increased to 6 per cent, that being higher than the interest rate, it is simply a question of time when he will pay out on an amortization basis, and an extension of the same rate of payment beyond the 20-year period will, of course, be no unbearable hardship.

Senator KENDRICK. Pardon me, this plan of repayment does not involve any charge of interest whatsoever, does it?

Mr. DAVIS. The present law?

Senator KENDRICK. Yes.

Mr. DAVIS. No; no charge of interest at all.

Senator KENDRICK. Just the principal?

Mr. DAVIS. Just the principal. But if the charges are based upon the principal cost and the same percentages as now charged, they would ultimately pay out. It would take a long time, but any interest charge less than 6 per cent would ultimately pay out, because for the seventh year and from that on he has to pay 6 per cent.

There are two classes of water rights. Those that I speak of are one class, and the others are charged on a slightly different basis, which makes a 7 per cent basis finally. But they both pay out in 20 years; they have 20 years in which to do it, and have a graduated system of payments. It would not be a complicated matter to so provide in the law, and it would provide for the ultimate repayment of all the money with interest, provided the interest does not exceed the amount of the final payment. Then it is a question of continuing that final payment long enough to pay that entire cost out.

To make the law a success in all cases, I think some such provision would be advisable. There are projects, of course, that could pay out on the basis of the law as it is now drawn, and usually the farmer could on most of the projects if he is sufficiently equipped with capital to start with, but the average settler does not have that large equipment. One of the provisions of the present law, which is also in the draft of this law as submitted to the Secretary, was to give preference rights to ex-service men. That implies that there is some privilege attached to this, but the way it is drawn it would be a privilege at which many of them would fail unless they would start with a good deal of capital, but with a proper graduation of payments they can pay out.

It is not an easy matter. Some men have not the capacity to pay out even under the graduated payments. It is like any other business. A man has to know how and be industrious and thrifty and have the qualities essential to success in any business in order to succeed in this. But there is a point at which only the exceptional men could succeed, and I think it is desirable to draw the law so that the average man could succeed.

Senator KENDRICK. Is it your opinion that the collection of interest on the part of the Government would prove an incentive to the settler to pay the construction charges off as quickly as possible?

Mr. DAVIS. It certainly would be a very strong incentive to any man with a business head on him. When he has an interest-bearing debt he would be likely to apply the old rule that the time to pay your debts is when you have got the money, and if he had a profitable season he would be more likely to reduce that than if it were a non-interest-bearing debt. There is no doubt about that.

Does that answer your question, Mr. Chairman?

The CHAIRMAN. Will you please state your suggestion again?

Mr. DAVIS. I suggest a graduated method of payments, which actually would take the form of an amortization method and which would run the debt for a longer period than the draft of the law proposes; at any rate, for a sufficient length of time so that that basis of payment would pay out. That would vary in accordance with the rate of interest that the bonds would bear.

The CHAIRMAN. What is your judgment of the merits, the general purposes, and principles involved in this bill? Do you favor it?

Mr. DAVIS. Yes, sir; I think it is an excellent move. In my opinion there is no enterprise of public works that the United States

is engaged in that is of such financial interest to the country at large as this. The financial merit depends very largely upon the fact that these funds are to be returned, and it is not ultimately any draft upon the Treasury.

The CHAIRMAN. You have been west recently visiting many of these projects, and I am sure your long familiarity with them and your travel over the area will permit you to answer this question: Is it your judgment that the 13 arid and semiarid States have practically reached the limit of their development without further cooperation with the States by the Government of the United States in obtaining more land?

Mr. DAVIS. No, sir; I would not agree with that proposition. I think that, with difficulty and slowly, there is still a considerable development in reclamation that will go on irrespective of such legislation as this.

The CHAIRMAN. Pardon me right there. That is due, is it not, to the annual accretions to the reclamation fund?

Mr. DAVIS. No; I mean by private enterprise, by corporate enterprise, and by municipal authorities.

I have been brought to that conclusion by the results of the late census, which shows in the past 10 years a large increase in irrigation outside of Government operation. That is mainly due to improvements in existing systems, by which they use the water more economically, and to small developments of various kinds which are not much in the public eye but in the aggregate amount to a great deal. The irrigated area in the last 10 years has increased, I think, about 4,000,000 acres.

Senator KENDRICK. In connection with the very question the chairman has asked you, I want to ask if you do not believe a great deal of this development that is going on under private enterprise in the absence of Government assistance would be on an uneconomical basis?

Mr. DAVIS. A great deal of it; that is very true.

Senator KENDRICK. And done at a very great disadvantage, and done in the way of patchwork, where a general plan should be carried out in order to make the whole system economical?

Mr. DAVIS. That is true; and I would say the majority of efforts at that kind of development would fail; there would be heavy losses in connection with that. A large part of the money expended by investors upon irrigation up to the present time has been lost.

Senator KENDRICK. Exactly. And is it not quite conceivable, too, that such patchwork development would prove disastrous to certain sections that would be involved, because of the fact that when a part of it was developed it would make it more expensive and more difficult to develop the balance?

Mr. DAVIS. That is true so far as they would undertake large projects, and undoubtedly a great deal of that would occur under private development, and has occurred in the past. But I think the intent of the chairman's question I would probably agree with, and that is that private enterprise would not attack these large projects without some kind of legislation similar to this. I think that is true, and what I meant to say was that there are a vast number of very small developments of various kinds which in the aggregate would and do amount to a great deal. Of course, the opportunity for those is constantly decreasing, because they are being developed.

The CHAIRMAN. But private capital is not going to go back and conserve the water in the water sheds, impound it at great expense, and distribute it far distant to large areas of public and privately owned lands?

Mr. DAVIS. No, sir.

The CHAIRMAN. That is what I am speaking of and not little streams that are deflected on the farms for poultry ranches and small gardens.

Mr. DAVIS. That is true. The small development is so small that it attracts little attention until aggregated in the census statistics and has, to a large extent, been already accomplished. But so far as large projects are concerned, which require storage reservoirs, which require high diversion dams, which require long tunnels and expensive and difficult canals on mountain sides and where the water is remote from the land to be reached or has to be pumped to a high level, those developments require too much money and too much time and too large an acreage to be developed at a time for success by private development.

The CHAIRMAN. And that is the large acreage now to be developed in the West?

Mr. DAVIS. Yes, sir; absolutely.

The CHAIRMAN. You agree with the proposition that the West has reached the point where it requires aid to go ahead and become the empire that it should become?

Mr. DAVIS. Yes, sir; that is true.

Senator KENDRICK. It might be just as truthfully said, I think, as is indicated in the chairman's question that a partial development will too often mean the prevention of a full development?

Mr. DAVIS. Yes, sir; that is true.

Senator KENDRICK. It requires a comprehensive scheme?

Mr. DAVIS. Yes, sir.

Senator KENDRICK. Then there is another chance for disastrous results to accrue, and that is in the character of the development. Under one situation, under ineffective development, the whole scheme proves a failure, whereas where there is a sufficient investment to begin with the whole plan proves a success?

Mr. DAVIS. Yes, sir.

Senator KENDRICK. I have known a great many developments in the West, as I am sure others around this table have, in which a temporary character of development to begin with has resulted in final abandonment of the whole enterprise because of the failure to see results in the distant future. It has meant disaster, where comprehensive development to begin with would have assured success.

Mr. DAVIS. Yes, sir.

Senator KENDRICK. Now, Mr. Director, you started a moment ago to tell us something, as I thought, in reference to the way the Government had heretofore initiated projects; in other words, the way it had made its selection of projects to begin development. I would like to have from you an opinion as to what will be the result of this bill upon that plan of selection. You stated that in the past you had selected projects because they were to be developed economically and the

lands brought into immediate use, and you had selected the most favorable ones first?

Mr. DAVIS. I was speaking more particularly of private enterprise having done that, but that is true to a degree also of Government development.

Senator KENDRICK. Has that been true also of the Reclamation Service?

Mr. DAVIS. Yes, sir; to a certain extent. There was one provision of the original reclamation act which modified that, which virtually required taking up a project in each State, by requiring the major part of the receipts from each State to be expended in that State. To do that, subject to the existence of projects, it was necessary to take up a project in each State. Under that act some projects were taken up in semiarid regions where it was difficult to get the farmers to use the water, and that proviso was stricken out of the law by an amendment adopted in 1910. With that eliminated it is now feasible to consider projects on the basis of their physical merits, exclusive of location. And while, of course, justice and proper policy indicate some attention to geographical distribution, it is not so mandatory as to give that precedence over physical merits, and that I consider the merit of the present law and of this proposed law.

The CHAIRMAN. I think I can read the mind of Senator Kendrick in this, that under the present law—the act of 1902—the Secretary of the Interior could determine upon what project would be commenced. Under this bill he does not by his own initiative take up the project, but it is brought before him by a district, State, or subdivision, and then he can ascertain the feasibility of it.

Mr. DAVIS. Yes, sir.

The CHAIRMAN. Now, taking the two ways, do you think this bill would permit the Secretary of the Interior to exercise his judgment alone without waiting for some one to inaugurate the work and start the movement in the States?

Senator KENDRICK. Yes, Mr. Chairman; and if I may, let me add a word there. Here is the idea I am anxious to have an expression on from the director, and that is what the effect of this law will be upon the initiation of projects remote from settlement, as a good many will be, for instance, in my State. You take that territory that is undeveloped at this time, where the land is largely owned by the Government and, we will say, to a large extent uninviting; has that kind of a territory any chance to benefit by the application of this law, or will it be necessary for some movement to be started on the part of those located in the neighborhood in order to interest the department in a given project.

Mr. DAVIS. I think the latter is the case; in other words, local initiation is required under this proposed law.

Senator KENDRICK. And is it not your judgment that under this law it will be almost necessary for there to have been some original development and some settlement in order to secure a further extension?

Mr. DAVIS. Yes, sir; it seems so to me.

Senator KENDRICK. That is the impression I have had. There are many projects in my State without any advantages of that kind to initiate a movement; they are desirable projects, too.

Mr. DAVIS. I do not think this law has any particular bearing on whether the project is remote or not, but only upon the point as to whether the land is in private ownership and somewhat settled or entirely public land. I hardly see how under this law a project consisting entirely of public land could be taken up. Perhaps I do not understand it.

Senator KENDRICK. Well, that is the impression I have of it. Of course, it is a great national scheme of development, and ultimately every part of the country will be benefited, and, as you have suggested, a spirit of fairness would prompt a geographical distribution of the benefits of the law.

Mr. DAVIS. The present law, however, is more adapted to public lands than to private lands.

Senator KENDRICK. Will the enactment of this legislation prevent you from proceeding to the development of a project as you have heretofore been authorized to do under the law?

Mr. DAVIS. I think not. It is my understanding that this would not hamper the operation of the present law but would permit much freer operation, in fact, by supplying the needs in a certain class of cases and leaving the old law freer to act in the case of public lands.

The CHAIRMAN. This law proceeds upon the theory that a district must be in existence, and if there is not anyone living on the sagebrush country, of course there is no way to organize a district. The necessity of that is in the fact that a district must issue bonds, from the sale of which you get the money. So a lot of this land could not possibly come in unless there were two or more persons to organize a district.

Mr. DAVIS. But in general the places where projects are possible may have a few settlers, and if a majority of the land is private land they may take in public land to nearly half of the project and still operate under this law by organizing a district under the existing law.

Senator KENDRICK. There could be no question about the application of the law under those conditions and the advantageous application of it, but I am concerned about the reclamation of territory in which there are next to no settlers, or none at all, with enormous tracts of land subject to irrigation and with a splendid water supply for such irrigation.

Mr. DAVIS. Those can be taken care of with the present law, and the present law will be adequate.

Mr. BIEN. Mr. Chairman, if I may interrupt, there is a point in section 18 that is a little hazy on this very question.

The CHAIRMAN. That is to be cleared up.

Mr. BIEN. It says:

> That all projects or units thereof upon which actual construction work shall be commenced after the passage of this act shall be organized in the manner provided herein.

That would mean the organization of an irrigation district, and if you have an area of 100,000 acres or more of public land it is practically impossible to organize an irrigation district. I think that is one difficulty with the bill, unless this section is changed.

Senator KENDRICK. I understood you to say a moment ago, Mr. Director, that you thought the effect of this bill would be to relieve the Reclamation Service under the law, as it now operates, from the responsibility of taking care of a good deal of this territory under

the old system, and that would make it less difficult to take up these new projects of the character that I have described. Is that your opinion?

Mr. DAVIS. Yes, sir; if this correction is made that Mr. Bien has called attention to so as to make that possible.

Senator KENDRICK. Then you do not believe that with the greatly increased activities of the department under this bill—as we hope there will be a great increase, as there will be many projects added to the ones you already have under way—you will be so absorbed in the work that you will fail to get to these new projects? You do not think you will fail to get to the new ones on account of the great work you are doing elsewhere?

Mr. DAVIS. There would be no difficulty of that kind, excepting the absorption of the funds. Of course so far as one project absorbs funds they will not be available for another; but so far as attention is concerned, the organization will of course be expanded to care for whatever the law provides, and there will be nothing to prevent the taking up of new projects. They will, however, be limited by the funds, and this bill does not take care of all future irrigation.

Senator KENDRICK. I think it might interest the committee to give one reason why I am concerned about the application of the law. In my State, Wyoming, we have found that the majority of our reclamation projects are both difficult and expensive. The cost has precluded development under private initiative and interest, and so it reduces it to a proposition of having the Government take it up. Now, I know of one tract of land that I have referred to this morning in which there is as much as 400,000 acres, almost in a body, just a little way north from the Union Pacific Railroad. It is almost an empire, and it is right along these great lakes that will undoubtedly be used for reservoir purposes, and lends itself to development easily and readily, but at rather great cost. There are very few settlers in that section of the country.

The CHAIRMAN. Is not that public domain, Senator Kendrick?

Senator KENDRICK. Yes, sir; every foot of it.

The CHAIRMAN. None of it privately owned?

Senator KENDRICK. None to speak of at all.

The CHAIRMAN. May I offer this suggestion. If you have a large quantity of the public domain and it should appear feasible for development, would not men go and settle on that land and organize a district?

Senator KENDRICK. You know, Mr. Chairman, these irrigation projects have in the past involved so many years before there was any income that people would become discouraged from acting individually. Of course one of the things that gives us a right to feel concerned about this is, in my judgment, the fact that Wyoming is to contribute through its natural resources more largely to the reclamation fund than any other single State in the Union. Do you not believe that to be true, Mr. Director?

Mr. DAVIS. I hope so.

Senator KENDRICK. Does it not look as if it would?

Mr. DAVIS. I do not know enough about the oil deposits in Wyoming to express an opinion on that.

Senator KENDRICK. I do not think there is a doubt of it. It has already, I think, paid into the Treasury more money.

Mr. DAVIS. I think it is undoubtedly going to be true in the long run, because that oil industry is going to take a long time to work out. The public lands in other States are mostly gone, so you would not expect any very large income from public lands in the future, while the deposits of oil are probably vast.

Senator KENDRICK. Well, we have already an accrued fund—unless it has been turned into the Treasury—of a large amount of royalties from oil, and of course our enormous coal territories are going to add to that, and naturally we are concerned in getting legislation that will permit the development of our arid lands.

The CHAIRMAN. Have you anything further to state to the committee, Mr. Davis?

Mr. DAVIS. I think not, Mr. Chairman. I think there is no need of taking further time, but I would like to ask this, if I may. I have some manuscript here that has been carefully prepared and contains some tables illustrating what I have said, with explanations of them. That I would like to insert in the record as a part of my remarks. That will give you the data which you need.

The CHAIRMAN. The data will be placed in the record. Thank you, Mr. Davis.

Mr. Bien, have you anything about which you would like to inform the committee?

Mr. BIEN. Mr. Chairman, I do not know that I can add anything particularly to what the director has said. I think the thought that Senator Kendrick brought out, of the possibility of small development interfering with larger development is important, because we have met it in so many places. We have had to pay large sums to get rid of old irrigation systems that had to be reconstructed or enlarged or developed. We have had to pay considerable sums to buy old water rights that often were merely record water rights and not actually in use. So it is very important, I think, that some action of this kind be taken so that the proposed project can be developed on a large scale and as a whole.

Senator KENDRICK. Right there I want to ask a question of Mr. Bien and the director, both. Is it not your judgment that we should provide, either by legislation or by appropriation, for the immediate investigation of every reclamation project in the country and the withdrawal of that project the same as others have been withdrawn by governmental action?

Mr. DAVIS. Yes, sir; such action as that is essential in order to prevent just what we were describing a while ago. We can not work out a comprehensive, wise plan for the development of these large systems unless we have just the information you speak of.

Senator KENDRICK. And you are handicapped at every turn when you begin a project that has been interfered with. That is about all that has been done in many cases; you have just done enough to prevent actual development.

Mr. DAVIS. That is true in some cases; but the feasibility of getting the most out of the natural resources depends very largely upon the wisdom of the comprehensive plan that you have described, which can not be drawn up without the comprehensive information on which to base it.

Senator KENDRICK. That is true. Then there is another thing that is of vital importance in connection with it and would have a

direct bearing upon it all. The moment this project was laid out and withdrawn by the Government as a part of the general plan, that would immediately be effective in settling it, as the chairman has pointed out, and people would be, in my judgment, more resigned to delay provided they knew that the development was going to come as fast as the money could be provided. It would bring about good understanding all around.

Mr. DAVIS. On that point, Senator, I think I shall have to differ with you. I think it is important to keep settlers off until you have got the water supply.

Senator KENDRICK. Until the water is ready to give them?

Mr. DAVIS. Yes, sir. The law originally provided that settlers could file upon the land that had been withdrawn for irrigation. That was found to be an unmitigated evil. Men went on there and filed with the expectation of getting water and many times were disappointed—nearly always were disappointed in the length of time it took to get it. So they produced nothing, and they sacrificed and wasted a great deal and, of course, made great complaint.

Senator KENDRICK. They were disappointed where nobody could possibly have avoided the very things that happened?

Mr. DAVIS. Absolutely; yes, sir.

We have statistics which I have handed to the reporter for insertion in the record, by permission of the chairman, showing the average production per acre in the country at large, and alongside of that the average upon the Government projects under irrigation. Now, we have a careful census, and I think our figures are probably more accurate than those for the country at large. They show in a general broad way that the acreage production, exclusive of live stock, which we do not include at all, is about double on the irrigated land what it is in the country at large. In other words, on the average, a man can raise as much on 40 acres of irrigated land as on 80 acres in the humid regions.

Senator KENDRICK. I want to ask this question about the matter we had under discussion a moment ago. Is it your opinion that we should include a provision in our bill that would require or make mandatory an investigation of all projects and the withdrawal of the same for development?

Mr. DAVIS. If the funds were provided, I think that would be a wise thing to do.

Senator KENDRICK. Well, we could extend that over a period of three or four years.

Mr. DAVIS. Of course whatever was spent on them would to that extent delay construction, but I do think that the general movement is a wise one.

I will say, Mr. Chairman, that the investigations, the topographic surveys and hydrographic surveys of the Geological Survey, are very slowly but gradually developing that information. If their appropriations were increased for those purposes, with a proviso that they should be carried out along those lines, it would be a valuable thing. It would help.

Senator KENDRICK. Do you not believe, Mr. Director, that it would be a distinct advantage to the proper functioning of this bill to include a provision in the bill requiring as early as practicable a comprehensive survey of the whole situation with a view to developing the information as to all of the lands subject to and coming under this act?

Mr. DAVIS. That would be a wise provision if the funds were available.

The CHAIRMAN. Is there anything further, Mr. Davis?

Mr. DAVIS. Nothing further, Mr. Chairman.

The CHAIRMAN. You may place in the record the data which you mentioned. Have you anything further, Mr. Bien?

Mr. BIEN. Nothing further, I think.

(The additional data submitted by the Director of the Reclamation Service is here printed in full as follows:)

UNITED STATES GOVERNMENT RECLAMATION PROJECTS, MAY, 1921.

PROGRESS OF IRRIGATION WORKS.

In 1906 and 1907 the Reclamation Service began the delivery of irrigation water to new and old lands, having taken over a few canals originally built under private auspices, which were absorbed into the larger Government projects in association with improved and more extensive systems of distribution as well as large storage reservoirs built by the service.

The principal projects already undertaken are listed in the attached tables, which show costs and results as well as possible extensions and some data available from the records of the service as to possible additional projects.

In these tables the costs and related figures have been stated for June, 30, 1920, the close of the past fiscal year. This is convenient for comparison with the latest (nineteenth) annual report of the Reclamation Service, in which these figures are amplified with many related data as of the same date, June 30, 1920.

COMPLETED WORKS.

Table I shows the extent to which Government projects have been completed. Many of the projects are susceptible of extension. As the works are put in service and large community values created, it becomes feasible and desirable to incur expense for canal extensions, concrete lining, or additional storage in order to bring lands under irrigation that were not regarded as feasible in the first instance.

The Salt River project in Arizona was completed some years ago to the extent contemplated and the operation and maintenance was turned over to the local organization of irrigators.

In California the Orland project has been completed as planned, but on petition of the irrigators additional work has been undertaken to concrete the canal system so as to improve the water supply.

In Colorado the Uncompahgre project is virtually complete, but consideration may be given to the construction of storage to insure against partial water shortage in rare years such as was anticipated from the records of the available water supply over a long period.

In Idaho the Boise project was completed according to the principal plans, but the service is now completing a small extension, and others are possible. The Minidoka project has been completed, and the operation and maintenance of the gravity unit, more than half of the project area, has been turned over to the Minidoka irrigation district. Further extension is possible.

The Huntley project has been essentially completed, but supplemental work has been proposed to safeguard a stretch of the main canal and provide drainage for some of the irrigated lands that are seeped or threatened with waterlogging.

On the Lower Yellowstone project, Montana-North Dakota, little or no construction work has been done for a number of years, but recently arrangements have been made with the irrigation districts to extend the project to completion as originally planned.

The North Platte project is a large development in Nebraska and Wyoming, divisible into several subprojects that may ultimately aggregate 250,000 acres or more. The largest of these, the Interstate division, has been completed except for drainage works that become necessary with continued irrigation of so large an area. The Fort Laramie division, across the river from the Interstate, is under construction, which is well advanced. The Northport division is also under construction, and there is a

possibility, depending partly on current litigation, that the Government will assume operation and maintenance of another large system serving the farmers' irrigation district. The Pathfinder storage reservoir has been completed and in service many years and serves the entire project, as well as the farmers' district and a number of private canals.

In New Mexico the Carlsbad project has been virtually completed and in service for many years.

Large works have been completed on the Rio Grande in New Mexico and Texas, including the Elephant Butte Reservoir and various distribution systems. The principal work remaining on this large project is the completion of an extension drainage system, which is well advanced, and improvements and extensions of the distribution works.

In North Dakota a small pumping project has been completed to the extent now planned.

In Oregon the Umatilla project is virtually complete as planned, but considerable extension has recently been proposed.

In South Dakota the Belle Fourche project has been completed and in service for many years with the possibility of two small extensions and small additional storage that have awaited the results of operation to supply a better knowledge of the available water supply and main canal capacity.

In Utah the Strawberry Valley project was in the main completed a number of years ago, but small extensions are possible and are under consideration.

In Washington the principal operations have been in the Yakima Valley, where a number of storage reservoirs and distribution systems have been completed. These however, have been planned as units in a comprehensive use of the resources of the Yakima Basin, which will permit additional storage and distribution systems.

The Okanogan, a small project near the Canadian border, was completed many years ago, but on account of the porous nature of the soil on part of the tract and the extraordinary variation in the run-off, not foretold by 15 years of careful measurements, some additional work has been undertaken to assure the water supply.

In Wyoming, in addition to the Interstate project on the North Platte, works have been built on Shoshone River where a large storage reservoir and certain distribution units are completed and in service, but large extensions to additional lands are possible.

TABLE I.—*United States Government reclamation projects.*

State.	Project.	Net cost of work under action to June 30, 1920.	Completed.				Additional.[1]	
			Reclaimed acreage.[2]		Gross value irrigated crops.[2]		Construction repayments.	Additional irrigable acreage.[3]	Probable additional cost.
			Under ditch 1920.	Irrigated, 1920.	1919	1920			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Arizona	Salt River	$10,548,129	213,000	205,000	$23,703,880	$18,551,940	$620,801.32	45,000	$8,000,000
Arizona-California	Yuma	8,979,556	24,550	17,000	1,902,250	3,775,000	275,922.14	30,000	2,600,000
California	Orland	965,542	20,530	13,870	2,862,250	549,700		15,000	655,000
Colorado	Grand Valley	3,358,506	35,000	11,730	370,620	825,300			
Do	Uncompahgre Valley	4,858,146	100,000	64,000	3,301,450	2,857,000			
Idaho	Boise	12,117,526	[4] 124,000	109,760	6,254,900	4,653,400	667,458.76	84,000	7,600,000
Do	King Hill	857,132	14,500	4,780	219,240	216,300	1,700	1,000	1,148,000
Do	Minidoka	6,641,893	121,500	107,550	4,729,160	4,764,600	564,555.31	100,000	[5] 22,000,000
Kansas	Garden City	385,652							
Montana	Huntley	1,419,871	31,270	20,020	948,960	583,780	310,200.23		575,000
Do	Milk River	2,736,844	30,000	24,000	1,230,000	1,230,000		65,000	4,000,000
Do	Sun River	2,736,202	30,730	14,780	372,630	302,800	122,954.37	120,000	10,000,000
Do	Lower Yellowstone	2,885,845	42,170	19,120	884,700	110,000.86	117,000		300,000
Nebraska-Wyoming	Lower Platte	14,166,251	165,000	145,000	4,440,450	1,473,000.86	50,000		8,200,000
Nevada	Newlands	6,475,178	60,310	45,610	1,940,650	1,898,400	413,961.03	10,000	4,000,000
New Mexico	Carlsbad	1,379,736	24,000	22,170	1,988,540	805,300	250,700.99	4,777	57,000
Do	Hondo	1,377,986							
New Mexico-Texas	Rio Grande [6]	[6] 8,352,396	115,000	82,000	3,538,100	4,638,200		40,000	1,000,000
North Dakota	North Dakota pumping	710,705	12,000	2,810	60,990	96,788	1,080.12		
Oregon	Umatilla	2,497,699	24,620	12,100	633,380	319,470	274,530.86	43,680	4,500,000
Oregon-California	Klamath	2,646,705	58,000	46,000	2,015,700	1,600,000	272,577.27	60,000	4,000,000
South Dakota	Belle Fourche	3,462,389	86,830	58,820	1,962,680	852,200	272,271.28	15,000	1,140,000
Utah	Strawberry Valley	3,482,236	30,000	32,350	1,075,050	1,845,900	109,303.50	10,000	1,000,000
Washington	Okanogan	1,456,214	10,000	6,000	1,045,000	1,045,000	3,566.57		1,000,000
Do	Yakima	10,149,924	132,730	121,610	[4] 721,400	11,801,800	2,146,525.95	210,000	30,000,000
Wyoming	Shoshone	6,218,983	65,890	45,650	1,986,970	1,063,640	496,225.61	160,000	15,000,000
Total		122,471,446	1,675,000	1,225,820	88,974,000	67,751,620	8,905,779.69	1,226,380	130,947,000

[1] These figures of additional acreage and cost include many extensions to which the United States is not committed by expenditure or otherwise, and are hence subject to eliminations or changes in accordance with later developments.

[2] Exclusive of upward of 1,000,000 acres served under the Warren Act.

[3] Exclusive of upward of 1,000,000 acres under other projects that would receive benefits and contribute to cost under Warren Act.

[4] Exclusive of about 24,000 acres in Nampa-Meridian district receiving its entire water supply from Government works, also large area receiving supplemental supply under Warren Act.

[5] Includes American Falls Reservoir, which would serve large additional area under Warren Act.

[6] Does not include $1,500,000 appropriated from general funds of Treasury on account of water furnished Mexico under treaty.

COSTS.

The net cost charged to construction accounts to June 30, 1920, is about $122,500,000 (Table I, column 3). The table gives the net cost of each primary project where construction work has been done with the reclamation fund, including general expense or overhead charges. There are not included any figures for the four projects on which the Reclamation Service has expended Indian appropriations, viz, the Blackfeet, Flathead, and Fort Peck, in Montana, and the Riverton in Wyoming, the last of which has become a reclamation project under current appropriations. Nor is there included the cost of investigations for possible additional projects. These have been proceeding continuously since the organization of the service and are now charged on the books with a cost of $1,350,000, the return of which to the reclamation fund is contingent on the later adoption of such projects for construction.

AREA RECLAIMED.

The works of the Reclamation Service in 1920 served areas aggregating about 2,775,000 irrigable acres, including 1,675,000 acres for which the Government systems furnished the sole supply of irrigation water and 1,100,000 acres to which in most cases the service furnished stored water in bulk to supplement the partial supply of private systems otherwise dependent on unregulated stream flow. Of the first class, 1,225,000 acres were actually irrigated and 1,156,000 harvested. Of the other class, from less complete information it is roughly estimated that 950,000 acres were irrigated and 913,000 cropped.

As suggested by the foregoing, the lands served by the works built under the Federal reclamation law may be conveniently considered as of two classes. The first comprises lands for which the United States under the reclamation act of June 17, 1902, has in general built a complete system of irrigation works from the point of storage to that of delivery to each farm or group of farms. These are the lands commonly referred to as included in the Government projects and include those tracts that under Government aid have been converted from sagebrush to productive farms. The other class of lands benefited by the Government works includes those served under the Warren Act of February 21, 1911. (36 Stat., 925.) This important supplement of the reclamation act provides a connecting link between the Government works and private systems built in the same vicinity or drainage basin. The latter commonly lack storage, depending originally on the unregulated flow of the streams alone. This natural flow often declines in the irrigation season to a point far below the needs of all the constructed canals and the typical case of service to such canals and lands from the Government works involves furnishing stored water at such times from the reservoirs built by the Reclamation Service. This may be simply delivered in bulk in the river channel, or the service may include carriage through other Government works and delivery at various stages of the process of distributing water to the individual farms.

Similarly, the quantities of water made available by the Government works in such cases vary from a complete supply to a small percentage of the total used by the irrigators. Even where only a portion of the total water used is furnished, it may be a vital part and may double the crop yield that would otherwise be secured.

PRODUCTIVITY OF RECLAIMED LANDS.

The arid lands when irrigated are intensively cultivated and yield large crops. In general, it may be roughly stated that the gross crop values on the Government reclamation projects average double those for the United States as a whole. This is indicated by the census figures in Table II.

It will be noted that in 1910 the ratio was just about 2:1, and in 1920 the ratio was well over 2:1, in favor of the Government project lands.

Between these years the ratio first declined and then increased. While the average for the United States was slowly increasing from 1910 to 1915, that for the Government projects was gradually declining, this due to the fact that the Government works began delivery of irrigation water to a substantial nucleus of well-developed lands that had been under irrigation from private canals for a number of years. The Government works furnished a better supply to these lands and also brought in large areas of new, raw lands. These raw lands during the first year or two did not attain full production, and this factor was sufficient during the period mentioned to bring down the average return per acre.

The extension of the Government projects continues to bring in such raw lands each year, but the relative weight of this factor becomes less and less each year, and

thus with the great increase in prices the curve of average gross crop value for the Government projects turned upward in 1915 and has since increased more rapidly than that for the United States as a whole.

TABLE II.—*Average crop values per acre.*

Year.	All United States.[1]	Government reclamation projects.[2]	Year.	All United States.[1]	Government reclamation projects.[2]
1910	$15.53	$30.00	1916	$22.10	$38.25
1911	15.26	28.00	1917	32.44	58.40
1912	15.63	25.00	1918	32.92	63.60
1913	16.36	24.50	1919	36.33	79.90
1914	16.36	23.50	1920	23.44	58.80
1915	16.88	24.00			

[1] Source: Bureau of Crop Estimates, U. S. Department of Agriculture. Figures after 1918 are for 10 crops combined, which comprise nearly 90 per cent of the area in all crops, and the average value of which closely approximates that for all crops.

[2] Source: Annual Reports, U. S. Reclamation Service. Figures refer to lands on Government projects proper.

CROP VALUES.

Since the Government works began delivery of irrigation water the crops produced on the reclaimed lands have exceeded $400,000,000 in value. This includes nothing for the large areas served under the Warren Act and does not include increased values produced as live stock and stock products.

For the lands on what may be called the Government projects proper, as defined above, a crop census for 1920 showed a gross crop value of about $68,000,000, or nearly $59 per acre for the 1,156,000 acres harvested (Table III). As already stated, these data are subject to some revision. The figures refer to lands for which the Government works are the sole source of irrigation water and the control of the Reclamation Service commonly extends throughout the system of lateral canals that deliver water to each farmer. Thus the service has a force of ditch riders in frequent touch with the irrigators. This provides a ready means of gathering census data of more than ordinary accuracy and at little or no extra expense, since the time for collecting these coincides with that when the water deliveries are dwindling in the fall. The ditch riders, though still required for occasional deliveries, have at that time less onerous duties than during the height of the irrigation season in connection with the operation and protection of the works.

The census reports thus secured for 1920 covered an irrigated area of 1,225,000 acres and 1,675,000 acres that were irrigable; that is, for which the works were prepared to supply water.

The difference between the areas irrigated and cropped, i. e., the acreage irrigated in 1920 but producing no crop that year, includes young fruit trees short of bearing, and alfalfa seeded in the fall.

The larger difference between irrigable and irrigated areas does not indicate a failure to utilize 450,000 acres and the water ready for it. A part of this balance on a few of the most easterly projects is cultivated or pastured without irrigation, often combining such operations with the more intensive ones of irrigation on the same farms. Another portion of this balance is public land that, though under ditch, is temporarily withheld from settlement for a seasoning of canals or other action preliminary to inviting in farmers. A small part is public land awaiting entry. Other tracts are State, railroad, or Indian lands more or less in process of subdivision and settlement.

But the largest part of the unirrigated land for which water is ready comprises a great number of small pieces of the irrigated farms. Thus, the figure given as irrigable agrees with the official farm unit plats and is the total area on which water charges are based, but necessarily a part of this is taken up by the farmers' ditches, buildings, and roads, so that it can not be cultivated. On this account the most complete use of the irrigable area to be ultimately expected will show the irrigation of about 90 per cent. Also the new settler of ordinary means can not put his whole unit to use the first year, nor the second, but gradually adds to the area graded, cultivated, and irrigated. For this reason the irrigated area lags behind the irrigable, both increasing each year as new farms are brought under the extended canal systems and the older ones progress toward complete cultivation.

In Table I the gross crop values on the Government projects proper are given for the years 1919 and 1920. The former was a banner year of highest prices, which,

however, were accompanied by the peak of production costs, so that the net returns for such a year may be no greater than those of other years. Compared to the figures for 1919, those for 1920 show substantial increases in areas irrigated and harvested, but reflect the great decline in the prices received by the farmer for all agricultural products, although the average gross crop value for the Government projects in that year was well over twice the similar average reported by the Department of Agriculture for the United States as a whole (Table II). Because of price changes, farmers are still holding from market some nonperishable products and later data are expected from a few districts. These may modify local figures substantially but can not affect in a large way the totals or averages for all the projects together. However, for this reason Table III is subject to minor correction.

TABLE III.—*Irrigation and crop results, Government reclamation projects, 1920.*[1]

State and project.	Lands on projects proper covered by crop census.[2]			
	Irrigated acreage.	Cropped acreage.[3]	Crop value.	
			Total.	Per acre.
Arizona, Salt River [4]	[5] 205,060	193,350	$18,551,800	$96.00
Arizona-California, Yuma	54,550	54,480	3,770,940	69.20
California, Orland	13,870	11,040	549,700	49.80
Colorado:				
Grand Valley	11,730	10,760	525,360	48.80
Uncompahgre	64,180	63,730	3,397,500	53.30
Idaho:				
Boise	109,760	100,700	4,653,400	46.20
King Hill [6]	4,780	4,520	216,500	47.90
Minidoka—				
Gravity division [7]	61,520	55,640	2,274,400	40.90
Pumping division	46,130	42,940	2,445,700	57.00
Montana:				
Huntley	20,020	20,020	543,780	27.10
Milk River [8]	24,330	22,330	332,200	14.90
Sun River—				
Fort Shaw division [9]	8,050	8,400	256,450	30.50
Greenfields division [10]	6,720	7,950	136,350	17.10
Montana-North Dakota, Lower Yellowstone	19,120	19,120	584,700	30.60
Nebraska-Wyoming, North Platte:				
Interstate division	88,000	86,920	4,043,600	46.50
N. P. C. & C. Co. lands	9,630	9,370	382,500	40.80
Fort Laramie division	8,530	8,490	253,180	29.80
Northport division	1,250	1,220	27,170	22.26
Nevada, Newlands	47,010	44,570	1,686,400	[11] 49.80
New Mexico, Carlsbad	22,170	20,180	895,300	44.40
New Mexico-Texas, Rio Grande	82,960	77,880	4,639,200	39.60
North Dakota, North Dakota pumping	2,810	2,740	86,780	31.70
Oregon, Umatilla	12,030	10,190	519,470	60.00
Oregon-California, Klamath	38,100	35,260	904,500	25.60
South Dakota, Belle Fourche	59,850	59,830	832,200	13.90
Utah, Strawberry Valley	32,350	29,250	1,945,900	66.50
Washington:				
Okanogan	5,440	4,920	431,200	87.70
Yakima—				
Sunnyside division	93,610	78,940	8,330,400	105.50
Tieton division	28,000	27,250	3,471,400	127.40
Wyoming, Shoshone:				
Garland division	35,190	34,850	929,100	29.70
Frannie division	10,460	9,270	134,540	16.34
Total	1,225,820	1,156,130	67,751,620	58.80

[1] Data are for calendar year (irrigation season) except on Salt River project data are for corresponding "agricultural year", October, 1919, to September, 1920.
[2] In addition areas aggregating over a million acres were served water from the Government works, usually stored water sold in bulk under the Warren Act to supplement private rights.
[3] Irrigated crops. Excludes small areas on few projects cropped by dry farming.
[4] Data furnished by Salt River Valley Waters Users' Association, which operated the project.
[5] Includes 5,536 acres reported as vacant, 3,032 acres of "home tracts" and 3,146 acres within townsites, on which no crop was reported.
[6] Data furnished by King Hill Irrigation District, which operated the project. This was built under private auspices and is under reconstruction by the United States.
[7] Data furnished by Minidoka Irrigation District, which operated the division.
[8] Crop reports covered an additional area of 12,760 acres cropped by dry farming, producing crops worth $102,500, or $8 per acre.
[9] Figures are for 203 irrigated farms, which included small tracts farmed without irrigation. In addition 3 units farmed "dry" reported a value of $900 from 45 acres pastured or cropped.
[10] Figures are for 151 irrigated farms, which included small tracts farmed without irrigation. Pending construction of storage a full water supply is not available.
[11] For crops in full production, excluding 9,720 acres of wild grass pasture and 4,759 acres otherwise not in full production. For all crops $37.80.

VALUE OF PROPERTY CREATED BY PRESENT INVESTMENT.

Full statistics are not available to show the values created by the Federal reclamation work. It is known that aside from the agricultural products large values have been created directly by the Government work and indirectly by related investments of others based on such work. It has been estimated, for example, that where the Government spends a dollar in irrigation from $5 to $10 are invested by the farmers and industries that are brought into being in the new communities.

The direct increase in land values has been enormous. This is illustrated by the frequent sales of the irrigated lands at high prices. Such prices are commonly reported at $200, $300, or $400 per acre, and in the case of well-improved lands have in rare instances reached as high as $1,000 an acre. On the basis of productivity, the lands most desert were well-nigh worthless, and large areas in the Government projects were held at $10 or less before the advent of the Reclamation Service. While precise figures are impossible, it is roughly estimated that Government irrigation has increased the value of the project lands $200 per acre on the average, or a total of over $350,000,000; that it has increased the value of 1,000,000 acres in other projects served under the Warren Act by $100 per acre, or a total of $100,000,000. The increase in the value of lands in the cities, towns, and villages within the projects is believed to exceed $100,000,000, making a grand total increase in land values alone of over half a billion dollars, due to the Government work.

In the foregoing no allowance has been made on account of 1,000,000 or more acres the irrigation of which is contemplated upon the completion of the projects in hand and the present market price of which has increased at least $50 per acre by reason of that fact.

The increase in the price received for State lands included in the projects and now mostly disposed of was at least $3,000,000 of direct revenue derived by the States.

RETURN OF MONEY TO RECLAMATION FUND.

The Federal reclamation law contemplates the return to the United States of the costs for constructed projects. These costs are charged against the lands benefited and repaid in small installments. In other words, the reclamation fund is a revolving fund.

On the going projects the expenditures and the resulting charges against the farmers may be conveniently classed under two heads, viz, those charged to construction accounts and, secondly, the expense for the annual operation and maintenance of the works.

The reclamation act of 1902 contemplated the return of the construction charge for any particular farm unit in a repayment period of 10 years after issuance of a public notice announcing the charge. By the extension act of 1914 this period was doubled and a schedule of percentage payments fixed in a way intended to facilitate the establishment of the settler on a going basis and enable him to repay the project cost in easy terms from the crop values taken from the irrigated land.

In the main the irrigators are keeping well up in their payments thus prescribed by law and public notice. To June 30, 1920, a total of $8,965,000 had been repaid into the reclamation fund in construction charges. (Table I, column 8.) On that date there were due $9,421,000 in such charges, so that only $456,000, or 5 per cent, of the accrued charges were unpaid, although the law gives the settler considerable time after any payment is due before he is sufficiently in default for nonpayment to require that he be delivered no more irrigation water.

The annual expense for operation and maintenance is largely a yearly turnover of funds; that is, it is represented by an annual operation and maintenance charge, which under the reclamation extension act must be fixed at an amount estimated to return the full cost of each year's operation. On June 30, 1920, operation and maintenance charges had aggregated $7,094,000, of which $6,275,000 had been collected.

RECLAMATION FUND LOSSES.

Although the reclamation fund is a revolving fund, it is a necessary inference from the law that some expenditures are to be made from the fund without certainty of return; in fact, that there will be some losses to the fund.

Thus the law necessarily provides for the study and survey of projects before their adoption and construction. Obviously some of the projects will be found infeasible, in which case there is no means of collecting the expense of the investigation.

This may well amount to many thousands of dollars on a particular project, and to date the Reclamation Service has an investment of upward of a million dollars in

such investigations for which there is at present no assurance of return. If these projects are later adopted for construction the costs of investigation will be included in the chages to be repaid.

In the case of constructed works, no provision is made for a profit of any particular project. Thus each project must stand by itself and the loss that may result on a relatively poor project can not be recouped on the most successful, as would be done in ordinary commercial practice, although the more successful projects could well stand the increase of charge that would result. Also where public notice is issued fixing the charge per acre on a completed project, if some of the acreage is later lost by waterlogging or other cause the law provides no method for transferring this small portion of the cost to other lands. In fact, the reclamation extension act specifically prohibits an increase in the charge announced by public notice except with specific approval of the water users.

In the business world any undertaking that can not make a profit will almost certainly show a loss, and this is the rule under which the Secretary of the Interior must administer these numerous large projects if we consider dollars and cents in the reclamation fund alone. In the administration of the reclamation law for 20 years and the investment of upward of $120,000,000 from the reclamation fund it is now estimated that about $5,000,000, or less than 5 per cent, are chargeable to the several items suggested above for which there is no return in sight.

In a broader sense, against this loss to the fund may be set down the new wealth exceeding a half billion dollars and the large annual crop values that have resulted from effort based on the investment of the reclamation fund.

ADDITIONAL WORKS.

The projects adopted by Congress to date are susceptible of extension to 1,236,000 acres additional to the area now irrigable from the Government systems. (Table I, column 9.) These areas would be supplemented in many cases by sales of water to still further areas under private canals in accordance with the terms of the Warren Act. That is, the areas in the table are such as are above described as the Government projects proper, but this does not mean that the United States has been committed to their reclamation. In other words, they are possible extensions of the adopted projects, dependent on further action, including appropriations, for Federal construction, dependent in some cases on further study regarding feasibility.

COSTS TO COMPLETE PROJECTS.

A number of the projects in hand yet require substantial expenditure to complete them to the extent planned, as for example, the Milk River and Sun River projects in Montana. Others, like the Orland in California and the Minidoka in Idaho, have been completed according to original plans, but are susceptible of considerable extension. Still others, like the Yakima, can utilize additional funds in both these ways. Some of the extensions are akin to new projects, but all are included here because they are associated with past work by location, usually by common use of certain works.

Assuming the construction of all these works, the projects now adopted, with extensions, can absorb an additional $131,000,000. (Table I, column 10.) These figures are necessarily subject to revision with price changes and because of the many uncertainties attendant upon any undertakings of such magnitude. At any stage of the preliminary arrangements obstacles may appear to make contemplated investments unwise or on account of experience as the developments proceed substantial changes may be made in the plans or scope of the projects.

PRESENT INCOME AVAILABLE FOR CONSTRUCTION.

It is estimated that the reclamation fund under present law and conditions will receive the following annually:

From public land sales	$2,150,000
Oil lease royalties	1,000,000
Construction repayments	2,500,000
Power sales	100,000
Miscellaneous returns	250,000
Total	6,000,000

Of these items the repayments for construction should gradually increase each year, but at the same time the receipts from public-land sales will probably decrease. The oil lease royalties are the most difficult to estimate.

From the total receipts $1,000,000 must be transferred to the general funds of the Treasury toward repayment of the $20,000,000 loaned the reclamation fund under the act of June 25, 1910 (36 Stat., 835) leaving about $5,000,000 for use in the reclamation work on construction.

At present considerable of this is required within developed projects, mainly for the construction of drainage systems to preserve the irrigated land and the security for the past investment. Hence only about $3,000,000 are now annually available for the extension of canal systems to new lands and other new construction work. Thus under present law and available funds it may take several decades to carry the projects already adopted to their full possibilities as outlined above, including the new projects recently adopted by Congress. Such an estimate of time is rough and will vary widely according to the assumptions made regarding receipts from oil leases and other sources, as well as provision for the extension of adopted projects beyond the limits to which the United States is already committed. Obviously the adoption of other new projects will spread the available funds even more thinly and require a correspondingly longer time for the completion of all.

READINESS FOR CONSTRUCTION.

In general the additional works for the extension of present projects can be undertaken and construction proceeded with to the extent that funds are made available In many cases detailed surveys have been made so that it would be a matter of a few months to write specifications and call for bids or organize forces for work by direct employment of labor. In some cases where storage reservoirs or other large works are involved another season of preliminary investigation may be necessary to prove foundations with the diamond drill or to acquire rights of way and other things essential to the security of the proposed Federal investment.

NEW PROJECTS.

A large number of possible additional projects have been investigated by the Reclamation Service in various degrees of detail, and a partial list of these is attached. (Table IV.) Other projects studied have in some cases been found infeasible. In other cases construction has been undertaken by other auspices following favorable reports by the service and in many other cases the funds available and the resulting examinations have been too scanty to justify the inclusion of the projects in a list attempting to give figures of acreage and probable cost. In any event such figures are necessarily subject to radical change with more intensive study of the projects before construction and with the later developments if the projects are adopted, as in the case of those already undertaken.

In addition to the many projects investigated by the Reclamation Service there is considerable information available regarding possible developments that have been studied by other agencies. Thus in Arizona there is the Parker project recently investigated by the Indian Service; in California the proposed Dom Pedro reservoir and related works planned by the Turlock and Modesto irrigation districts, and so on through the various arid States.

TABLE IV.—*Partial list of possible additional projects.*

[From investigations by United States Reclamation Service.]

State and project.	Probable irrigable acreage.[1]	Probable cost per acre.[1]
Arizona, San Carlos	100,000	$135–$150
California:	300,000–800,000	.....
Imperial Valley	225,000	135– 180
Iron Canyon	10,000	95– 125
Colorado, Orchard Mesa		
Idaho:[2]	25,000	95– 110
Gem district	2,500	85– 95
Lake Walcott		

[1] These figures of probable acreage and cost are only a rough index of the possibilities based on partial surveys and studies. Actual areas and costs may vary widely from the figures here given.

[2] The large projects in Idaho that come to mind, such as the Bruneau and Mountain Home, are not here included because not investigated by the Reclamation Service sufficiently even for rough estimates.

TABLE IV.—*Partial list of possible additional projects*—Continued.

State and project.	Probable irrigable acreage.	Probable cost per acre.
Montana:		
Bitter Root	20,000	$70- $80
Missoula-Hutson	8,000	40- 50
Nebraska, Dawson County	45,000	60- 75
Nevada, Humboldt River	20,000	100
New Mexico:		
San Juan	100,000	.....
Middle Rio Grande	100,000	65- 75
Oregon:		
Deschutes [3]	50,000-100,000	.....
Owyhee	50,000	120
Lower Powder River	40,000- 60,000	110- 130
Texas, Lower Rio Grande	500,000	.....
Utah, Green River	50,000	.....
Wyoming, Riverton [3]	85,000-100,000	60- 75

[3] Now adopted by Congress for construction.

RECLAIMABLE LAND.

The projects listed in Table IV contemplate the reclamation of from two to three million acres. The figures just made available by the 1920 census show a total irrigated area in the United States in 1919 of 18,200,000 acres. Various estimates have been made of the area that may be ultimately irrigated in this country, and while these are admittedly in the nature of guesses, the most conservative figures indicate that probably an additional twenty or thirty million acres may be feasible of irrigation.

PROBABLE COSTS.

As additional lands are brought under canal the remaining possibilities become increasingly difficult and expensive. Thus in the early censuses of irrigation the average costs per acre are reported as low as $10 or $15, while the recent census indicates an average cost of about $40 per acre for the additional lands brought under canal during the past decade. Recently projects have been urged at an expected cost of $100, $150, or even more. The projects listed in Table III thus range in probable cost from $25 to $180.

PURPOSE FOR WHICH LAND IS FITTED.

The possible projects listed are believed to embrace land capable of intensive production of a wide variety of crops, such as those now produced on the going projects that have been built by the Government. In the case of the projects in the Southwest the lands should be settled in small farm units and can be cultivated and irrigated the year around for the production of citrus fruit, long-staple cotton, and other high-priced products. In the colder projects to the north hay and grain will be the principal yields during the relatively short growing season, and the farm units should be correspondingly larger. On the bulk of the projects with temperate climate and growing season of fair length alfalfa will doubtless be a basic crop, with dairy and live-stock operations prominent. In many cases another basic crop will be sugar beets. Numerous beet-sugar factories have been built on the Government projects, and through contracts the farmers can assure themselves of a market for a cash crop at agreed prices. On many of the projects, as in the past, special crops will doubtless be developed with profit, taking advantage of peculiar conditions of climate, soil, and available markets.

On all of the Government projects recent openings of public lands have given preference of settlement to ex-service men, and it seems likely that this policy will be continued by the Congress after the expiration of the present law providing for it, which extends only to February 14, 1922. The former soldiers have shown great interest in the opportunities to acquire homes on the land, as is well illustrated in the last opening on the North Platte project in Wyoming, where for 80 farm units there were 3,300 soldier applicants, each of whom showed good faith in making application by filing a substantial first payment and offering complete reimbursement of the United States for the proportionate part of the project cost. Over $1,250,000 were received in cash in connection with this single opening.

ORGANIZATION OF RECLAMATION SERVICE.

The Federal reclamation law places in the Secretary of the Interior the authority and responsibility for the reclamation work. As the instrument for the execution of such work the Secretary has organized the Reclamation Service, headed by the director, who has headquarters at Washington and frequently travels to the projects and proposed works in the field. A subordinate headquarters office is maintained at Denver in charge of the chief engineer, who with two assistant chief engineers has more immediate contact with all the field work.

In the Washington office are conducted those operations that are necessary in dealing with the Secretary, Congress, the Treasury Department, and other Federal agencies, as well as those involving general direction and administration of the work.

At Denver there is a force of technical men for the design of the principal engineering structures, including work of an electrical nature. That is the headquarters point for extensive purchases, and the chief engineer and two assistants alternate in charge of the office and traveling from one project to another to maintain close administration and give prompt advice and decision on engineering and other details.

Each project is in administrative charge of a project manager. The project force includes the necessary engineers, clerical help, and operatives such as gate tenders, ditch riders, and water masters for the work of constructing, operating, and maintaining the irrigation systems, with sufficient common and skilled labor for the work in hand.

To handle the large number of contracts and other legal matters involved in the work, there is at Washington a chief counsel, and at various points in the field district counsel constituting a legal organization.

Thus the personnel of the service is a force of managers, engineers, assistants, juniors, and draftsmen, numbering about 250; legal counsel and assistants, about 25; accountants and other clerical employees, about 300; registered or noneducational men, about 1,100; and laborers and mechanics, about 2,200.

EXPANSION.

Efficiency and economy place a limit on the sudden expansion of forces, but with present conditions of deflation, lowering prices, and reduced demands for labor of all kinds, the service is receiving a great and increasing number of requests for employment, and the announcements of examinations by the Civil Service Commission are receiving a ready response in large numbers, so that within reasonable limits it is believed feasible to expand the organization with promptness and efficiency to any desired magnitude justified by the work and funds available.

Many of the applicants for employment are ex-service men. The civil service law now gives them preference for positions filled after examination by the commission and the same rule might be followed in local employments on the projects, as is suggested in a bill now before the Congress. Thus the reclamation work may offer former soldiers employment as well as land.

That the present organization is sufficiently elastic to permit considerable expansion is proven by the experience of the past during which the expenditures and the number of persons employed have varied over 100 per cent within a short period. This is facilitated by the fact that the service includes no statutory positions, and it would be feasible for the force to double as the work required and shrink back to the original number within a year. At the same time all employments are made in accordance with the civil service law and the rules of the Civil Service Commission, which has issued special regulations governing employment in the Reclamation Service.

Recent appropriations from the reclamation fund have averaged, roughly, $8,000,000 per annum, and the forces at present are organized on that basis. In at least one year past the service has expended about twice that amount, and it would be a relatively simple matter to expand the force sufficiently for such an expenditure. In fact, it is believed feasible, working through the established methods and in keeping with the civil-service requirements, to adapt the force for an expenditure of the amounts that have been suggested, namely $20,000,000 in 1922; $25,000,000 in 1923; $35,000,000 in 1924; and $40,000,000 annually thereafter.

LOSSES ON ACCOUNT OF INSUFFICIENT FUNDS.

Section 9 of the reclamation act as originally passed made certain requirements regarding the distribution of the reclamation fund. This section was repealed in 1910, but before then virtually compelled the inauguration of one or more projects in each of the reclamation States. This resulted in the beginning of more projects than

the fund could carry vigorously to completion, causing delay and some additional cost. That is, with the incoming funds spread thinly over numerous projects it has taken many more years to complete these than would have been necessary with a supply of funds sufficient for the most rapid progress consistent with economy. Some added cost resulted because of the maintenance of a construction organization and the continuance of general expense or "overhead" for a longer period than otherwise necessary.

In case of specific large pieces of construction work, lack of sufficient funds has worked a considerable increase in cost. The time that has elapsed since the projects in hand were inaugurated has been accompanied by rising price levels, so that structures built to-day and in recent years cost far more than when tentatively planned a number of years ago.

Another result is that for a time the United States has a latent investment in certain parts of the work that must be built of full size or capacity at once. For example, on the Shoshone project in Wyoming it was necessary to build a masonry dam in an inaccessible canyon under physical difficulties. The conditions logically called for the completion of the structure as rapidly as possible after it was begun to avoid loss from floods and the duplication of expensive preparatory work. The result is that we have a completed storage reservoir that may ultimately serve 200,000 acres or more, whereas the distribution systems, due to limited funds, have been completed for only 70,000 acres, and large additional divisions of the project have been postponed. Meanwhile a portion of the reservoir cost is charged to prospective units, and a portion of the reclamation fund is thus tied up, so that its return or repayment awaits the construction and settlement of the additional units that in turn are delayed by lack of funds.

For similar reasons limited funds work a loss or added expense for the operation and maintenance of the works, or at least increase the expense per acre. As in the case of construction work, there is a certain amount of overhead organization essential in operation and maintenance, but this does not increase in proportion to the acreage, so that by the inclusion of a greater acreage an economy can be brought about in the charge per acre. The same thing is true of the cost of operating and keeping up the works common to the projects as a whole. For example, in the case of Shoshone Reservoir just cited the cost of operating and maintaining the dam and other works is virtually fixed regardless of the area served.

There is also a loss to the country in crop values that might be produced on such additional lands. The Government projects are susceptible of extension to a million acres, which, assuming values of recent years, might have been producing an annual crop yield worth $50,000,000 or more.

The CHAIRMAN. Judge Will R. King, formerly chief counsel of the Reclamation Service, has submitted for the use of the committee an illuminating and most excellent article on the general subject of reclamation by irrigation, with sidelights on the legal aspect of the subject, which, if there is no objection, will be placed in the record.

STATEMENT BEFORE THE COMMITTEE ON IRRIGATION AND RECLAMATION, UNITED STATES SENATE, IN RE S. 586, BY JUDGE WILL R. KING, FORMERLY CHIEF COUNSEL OF THE UNITED STATES RECLAMATION SERVICE, MAY 7, 1913–JUNE 15, 1920.

Mr. CHAIRMAN: So much has been said heretofore, and especially at this hearing, in favor of matters looking toward the providing of funds for the further reclamation of arid lands, that it would seem like surplusage for me to elucidate further on the subject.

There are some features, however, to which I feel I might be justified in directing your attention. In the outset permit me to say that after many years of experience in assisting in work along these lines that I am of the opinion that for the reclamation of arid lands, the bill now under consideration is the most efficient and complete yet presented. The nearly 20 years of experiments by the Reclamation Service has demonstrated beyond the possibility of a doubt that reclamation of arid lands through Government aid is a complete success. The successful features, I take it, are fully understood by all. Its success, therefore, would seem to be a conclusive argument in favor of further extending this beneficent aid in the way of placing lands heretofore unproductive in the productive class.

As has been repeatedly stated, in fact it is conceded, that we have reached a stage in development along these lines where, except in rare instances, private enterprise in reclamation work can no longer be depended upon.

Under this bill, briefly stated, the Government proposes to loan to the reclamation fund sums varying from $20,000,000 to $50,000,000 per annum until the total reaches

$250,000,000; the fund thus loaned, at the end of 20 years to be returned with accumulated interest to the United States Treasury. But before returning the fund contemplated, it will leave behind a trail of enterprise so vast in extent as has not heretofore been within the dreams of even the most optimistic of temperament.

Under the provisions of the act, concretely stated, during the first year $20,000,000 will be made available for use in the construction of reclamation projects. Before an irrigation project is begun an irrigation district must be organized under the laws of the State in which a contemplated project may be situated, and bonds issued equal in amount to the estimated cost of construction. These bonds are to be deposited with the Federal Farm Loan Board to secure a return of the cost of construction of the project thus bonded, later to be sold for the purpose of returning to the reclamation fund, provided in the bill, the sum expended, the moneys returned again to become available for use in the construction of other projects.

In the ordinary course of events, judged from years of observation and experience in reference to the value of lands reclaimed by the Government through the Reclamation Service, it would seem safe to assume that at the end of five years the lands within the projects constructed and bonded will reach a value of double the par value of the bonds, whereupon the bonds will be sold, and the moneys with accumulated interest received therefrom returned to the reclamation fund, again to be used in other construction work.

Assuming the entire $20,000,000 will be expended during the first year, then at the end of the five years and at the time the bonds may be sold the interest will amount to $5,000,000, thereby returning to the reclamation construction fund an additional sum in that amount. It accordingly follows that the $20,000,000 thus invested for the first year, after having been consumed in the construction of projects making productive the previously unproductive lands, still presents to the fund not only an additional sum equal to that expended, but $5,000,000 additional, making available thereby for further construction work the sum of $25,000,000.

Carrying this illustration further, take the second year as another concrete example: For the second year $35,000,000 will be available for use in construction work. Taking five years, which is ample time, as the "turnover" basis there will be for sale at the end of the seventh year an additional $35,000,000 in bonds plus $8,750,000 of accrued interest thereon, or a total of $43,750,000, making this sum again available for the building of other projects, while the $35,000,000 referred to will have been previously planted into irrigation and productive projects. This "turnover" period, as we call it, is brought about by the provision in the act authorizing the Secretary to call upon the Federal Farm Loan Board, whenever deemed advisable, to make an appraisal of the value of the lands within a district comprising a project and whenever the lands shall be found to be double the par value of the bonds, the Farm Loan Board, with whom the bonds have been deposited, is required to place the same on the market for sale and place the net proceeds to the credit of the reclamation fund for further construction purposes.

It will be observed that after the $250,000,000 fund shall have been consumed in this way the fund will still remain available for reclamation purposes and so continues until 1942, covering a period of but little more duration than that heretofore consumed by the Reclamation Service in the expenditure of about $125,000,000 in reclamation work.

Following out the method of calculation outlined by use of the "turnover" process it will be found that at the end of 20 years there will have been expended, or "planted," in irrigation work the sum of about $1,196,002.75. At the close of this period the $250,000,000 with accumulated interest, aggregating $476,250,000, by paying $50,000,000 annually until fully paid, will be returned to the Treasury, while many millions of dollars will remain available for further construction purposes.

Following this fund to the end or until the full $250,000,000 with accrued interest is paid, under the $50,000,000 annual reimbursement provision of the act, which will fully amortize in 1956, the Government will receive in return the sum of $250,000,000 principal and $353,562,889 interest, a total of $603,562,889. And at the close of the year 1956, there will have been planted into irrigation projects the sum of $1,414,175,563.75, or about seven times the sum loaned, which, with principal and accumulated interest returned to the United States Treasury, represents a business investment aggregating $2,017,738,457.75.

For the convenience of those who might wish to verify these estimates, and with a view to demonstrating the almost unlimited benefits to accrue under the bill by use of the small loan of twenty millions the first year, thirty-five million the second year forty-five million the third year, and fifty millions annually for three years thereafter, have prepared and submit a table of computations, disclosing moneys on hands and available for reclamation use during the period authorized under the bill.

Year.	Principal.	5 per cent interest per annum.	Total interest outstanding.	Total principal and interest.	Amortisation. Yearly payments on principal.	Amortisation. Total repaid.	Bonds sold.	Interest accretions (5 per cent).	Yearly project development.	Total planted into projects.
1921	$20,000,000.00	$1,000,000.00	$1,000,000.00	$20,000,000.00					$20,000,000.00	$20,000,000.00
1922	35,000,000.00	1,750,000.00	2,750,000.00	35,750,000.00					35,000,000.00	55,000,000.00
1923	45,000,000.00	2,750,000.00	5,500,000.00	47,750,000.00					45,000,000.00	100,000,000.00
1924	50,000,000.00	5,000,000.00	8,750,000.00	58,750,000.00					50,000,000.00	150,000,000.00
1925	50,000,000.00	7,500,000.00	13,000,000.00	63,000,000.00					50,000,000.00	200,000,000.00
1926	50,000,000.00	10,000,000.00	18,250,000.00	68,250,000.00					50,000,000.00	250,000,000.00
1927	12,500,000.00	12,500,000.00	24,000,000.00	36,500,000.00			$20,000,000.00	$1,000,000.00	25,000,000.00	275,000,000.00
1928	12,500,000.00	12,500,000.00	29,750,000.00	42,250,000.00			35,000,000.00	2,750,000.00	43,750,000.00	318,750,000.00
1929	12,500,000.00	12,500,000.00	35,750,000.00	48,250,000.00			45,000,000.00	5,500,000.00	62,500,000.00	381,250,000.00
1930	12,500,000.00	12,500,000.00	42,250,000.00	54,750,000.00			50,000,000.00	8,750,000.00	71,250,000.00	452,500,000.00
1931	12,500,000.00	12,500,000.00	49,000,000.00	61,500,000.00			50,000,000.00	13,000,000.00	80,000,000.00	532,500,000.00
1932	12,500,000.00	12,500,000.00	56,000,000.00	68,500,000.00			50,000,000.00	18,250,000.00	87,500,000.00	620,000,000.00
1933	12,500,000.00	12,500,000.00	63,250,000.00	75,750,000.00			50,000,000.00	24,000,000.00	95,000,000.00	715,000,000.00
1934	12,500,000.00	12,500,000.00	70,750,000.00	83,250,000.00			12,500,000.00	29,750,000.00	92,500,000.00	807,500,000.00
1935	12,500,000.00	12,500,000.00	78,500,000.00	91,000,000.00			12,500,000.00	35,750,000.00	100,000,000.00	907,500,000.00
1936	12,500,000.00	12,500,000.00	86,500,000.00	99,000,000.00			12,500,000.00	42,250,000.00	107,500,000.00	1,015,000,000.00
1937	12,500,000.00	12,500,000.00	94,750,000.00	107,250,000.00			12,500,000.00	49,000,000.00	115,000,000.00	1,130,000,000.00
1938	12,500,000.00	12,500,000.00	103,250,000.00	115,750,000.00			12,500,000.00	56,000,000.00	122,500,000.00	1,252,500,000.00
1939	12,500,000.00	12,500,000.00	112,000,000.00	124,500,000.00			12,500,000.00	63,250,000.00	130,000,000.00	1,382,500,000.00
1940	12,500,000.00	12,500,000.00	121,000,000.00	133,500,000.00			12,500,000.00	70,750,000.00	137,500,000.00	1,520,000,000.00
1941	12,500,000.00	12,500,000.00	130,250,000.00	142,750,000.00			12,500,000.00	78,500,000.00	145,000,000.00	1,665,000,000.00
1942	12,500,000.00	12,500,000.00	139,750,000.00	152,250,000.00			12,500,000.00	86,500,000.00	152,500,000.00	1,817,500,000.00
1943	12,500,000.00	12,500,000.00	149,500,000.00	162,000,000.00			12,500,000.00	94,750,000.00	160,000,000.00	1,977,500,000.00
1944	12,500,000.00	12,500,000.00	159,500,000.00	172,000,000.00			12,500,000.00	103,250,000.00	167,500,000.00	2,145,000,000.00
1945	12,500,000.00	12,500,000.00	169,750,000.00	182,250,000.00			12,500,000.00	112,000,000.00	175,000,000.00	2,320,000,000.00
1946	12,500,000.00	12,500,000.00	180,250,000.00	192,750,000.00			12,500,000.00	121,000,000.00	182,500,000.00	2,502,500,000.00
1947	12,500,000.00	12,500,000.00	191,000,000.00	203,500,000.00			12,500,000.00	130,250,000.00	190,000,000.00	2,692,500,000.00
1948	12,500,000.00	12,500,000.00	202,000,000.00	214,500,000.00			12,500,000.00	139,750,000.00	197,500,000.00	2,890,000,000.00
1949	12,500,000.00	12,500,000.00	213,250,000.00	225,750,000.00			12,500,000.00	149,500,000.00	205,000,000.00	3,095,000,000.00
1950	12,500,000.00	12,500,000.00	224,750,000.00	237,250,000.00			12,500,000.00	159,500,000.00	212,500,000.00	3,307,500,000.00
1951	12,500,000.00	12,500,000.00	236,500,000.00	249,000,000.00			12,500,000.00	169,750,000.00	220,000,000.00	3,527,500,000.00
1952	12,500,000.00	12,500,000.00	248,500,000.00	261,000,000.00			12,500,000.00	180,250,000.00	227,500,000.00	3,755,000,000.00
1953	12,500,000.00	12,500,000.00	260,750,000.00	273,250,000.00			12,500,000.00	191,000,000.00	235,000,000.00	3,990,000,000.00
1954	12,500,000.00	12,500,000.00	273,250,000.00	285,750,000.00			12,500,000.00	202,000,000.00	242,500,000.00	4,232,500,000.00
1955	12,500,000.00	12,500,000.00	286,000,000.00	298,500,000.00			12,500,000.00	213,250,000.00	250,000,000.00	4,482,500,000.00
1956	12,500,000.00	12,500,000.00	299,000,000.00	311,500,000.00			12,500,000.00	224,750,000.00	257,500,000.00	4,740,000,000.00
1957	12,500,000.00	12,500,000.00	312,250,000.00	324,750,000.00			12,500,000.00	236,500,000.00	265,000,000.00	5,005,000,000.00
1958	12,500,000.00	12,500,000.00	325,750,000.00	338,250,000.00			12,500,000.00	248,500,000.00	272,500,000.00	5,277,500,000.00
1959	12,500,000.00	12,500,000.00	339,500,000.00	352,000,000.00			12,500,000.00	260,750,000.00	280,000,000.00	5,557,500,000.00
1960	12,500,000.00	12,500,000.00	353,500,000.00	366,000,000.00			12,500,000.00	273,250,000.00	287,500,000.00	5,845,000,000.00
1961	12,500,000.00	12,500,000.00	367,750,000.00	380,250,000.00			12,500,000.00	286,000,000.00	295,000,000.00	6,140,000,000.00
1962	12,500,000.00	12,500,000.00	382,250,000.00	394,750,000.00			12,500,000.00	299,000,000.00	302,500,000.00	6,442,500,000.00
1963	12,500,000.00	12,500,000.00	397,000,000.00	409,500,000.00			12,500,000.00	312,250,000.00	310,000,000.00	6,752,500,000.00
1964	12,500,000.00	12,500,000.00	412,000,000.00	424,500,000.00			12,500,000.00	325,750,000.00	317,500,000.00	7,070,000,000.00
1965	12,500,000.00	12,500,000.00	427,250,000.00	439,750,000.00			12,500,000.00	339,500,000.00	325,000,000.00	7,395,000,000.00
1966	12,500,000.00	12,500,000.00	442,750,000.00	455,250,000.00			12,500,000.00	353,500,000.00	332,500,000.00	7,727,500,000.00
1967	12,500,000.00	12,500,000.00	458,500,000.00	471,000,000.00			12,500,000.00	367,750,000.00	340,000,000.00	8,067,500,000.00
1968	12,500,000.00	12,500,000.00	474,500,000.00	487,000,000.00			12,500,000.00	382,250,000.00	347,500,000.00	8,415,000,000.00
1969	12,500,000.00	12,500,000.00	490,750,000.00	503,250,000.00			12,500,000.00	397,000,000.00	355,000,000.00	8,770,000,000.00
1940	250,000,000.00	12,500,000.00	503,250,000.00	753,250,000.00	$37,500,000.00	$37,500,000.00	12,500,000.00	412,000,000.00	362,500,000.00	9,132,500,000.00
1941	250,000,000.00	12,500,000.00	515,750,000.00	765,750,000.00	37,500,000.00	75,000,000.00	12,500,000.00	427,250,000.00	370,000,000.00	9,502,500,000.00
1942	250,000,000.00	12,500,000.00	528,250,000.00	778,250,000.00	37,500,000.00	112,500,000.00	12,500,000.00	442,750,000.00	377,500,000.00	9,880,000,000.00
1943	250,000,000.00	12,500,000.00	540,750,000.00	790,750,000.00	37,500,000.00	150,000,000.00	12,500,000.00	458,500,000.00	385,000,000.00	10,265,000,000.00
1944	250,000,000.00	12,500,000.00	553,250,000.00	803,250,000.00	37,500,000.00	187,500,000.00	12,500,000.00	474,500,000.00	392,500,000.00	10,657,500,000.00
1945	250,000,000.00	12,500,000.00	565,750,000.00	815,750,000.00	37,500,000.00	225,000,000.00	12,500,000.00	490,750,000.00	400,000,000.00	11,057,500,000.00
1946	250,000,000.00	12,500,000.00	578,250,000.00	828,250,000.00	37,500,000.00	262,500,000.00	12,500,000.00	507,250,000.00	407,500,000.00	11,465,000,000.00
1947	250,000,000.00	12,500,000.00	590,750,000.00	840,750,000.00	37,500,000.00	300,000,000.00	12,500,000.00	524,000,000.00	415,000,000.00	11,880,000,000.00
1948	249,750,000.00	12,487,500.00	603,237,500.00	852,987,500.00	37,462,500.00	337,462,500.00	12,487,500.00	541,000,000.00	422,500,000.00	12,302,500,000.00
1949	249,500,000.00	12,475,000.00	615,712,500.00	865,212,500.00	37,425,000.00	374,887,500.00	12,475,000.00	558,250,000.00	430,000,000.00	12,732,500,000.00
1950	212,237,500.00	10,611,875.00	626,324,375.00	838,561,875.00	31,835,625.00	406,723,125.00	10,611,875.00	575,500,000.00	437,500,000.00	13,170,000,000.00
1951	172,446,875.00	8,622,343.75	634,946,718.75	807,393,593.75	25,866,703.13	432,589,828.13	8,622,343.75	592,750,000.00	445,000,000.00	13,615,000,000.00
1952	131,671,843.75	6,583,592.20	641,530,310.95	773,202,154.70	19,750,776.56	452,340,604.69	6,583,592.20	610,000,000.00	452,500,000.00	14,067,500,000.00
1953	106,887,468.75	5,344,373.45	646,874,684.40	753,762,153.15	16,033,310.16	468,373,914.85	5,344,373.45	627,250,000.00	460,000,000.00	14,527,500,000.00
1954	39,403,768.40	1,970,188.42	648,844,872.82	688,248,641.22	5,910,565.26	474,284,480.11	1,970,188.42	644,500,000.00	467,500,000.00	14,995,000,000.00
1955	29,194,519.30	1,474,715.95	650,319,588.77	679,514,108.07	4,379,177.90	478,663,658.01	1,459,725.95	661,750,000.00	475,000,000.00	15,470,000,000.00
1956	19,008,347.75	950,316.40	651,269,905.17	670,278,252.92	2,851,247.63	481,514,905.64	950,316.40	679,000,000.00	482,500,000.00	15,952,500,000.00
1957	7,965,776.65		651,269,905.17	659,235,682.82	1,194,866.50	482,709,772.14		696,250,000.00	490,000,000.00	16,442,500,000.00
1958			651,269,905.17	651,269,905.17	1,194,866.50	483,904,638.64		713,500,000.00	497,500,000.00	16,940,000,000.00
1959			651,269,905.17	651,269,905.17	1,194,866.50	485,099,505.14		730,750,000.00	505,000,000.00	17,445,000,000.00
1960			651,269,905.17	651,269,905.17	1,194,866.50	486,294,371.64		748,000,000.00	512,500,000.00	17,957,500,000.00
1961			651,269,905.17	651,269,905.17	1,194,866.50	487,489,238.14		765,250,000.00	520,000,000.00	18,477,500,000.00
1962			651,269,905.17	651,269,905.17	1,194,866.50	488,684,104.64		782,500,000.00	527,500,000.00	19,005,000,000.00
1963			651,269,905.17	651,269,905.17	1,194,866.50	489,878,971.14		799,750,000.00	535,000,000.00	19,540,000,000.00
1964			651,269,905.17	651,269,905.17	1,194,866.50	491,073,837.64		817,000,000.00	542,500,000.00	20,082,500,000.00
1965			651,269,905.17	651,269,905.17	1,194,866.50	492,268,704.14		834,250,000.00	550,000,000.00	20,632,500,000.00
1966			651,269,905.17	651,269,905.17	1,194,866.50	493,463,570.64		851,500,000.00	557,500,000.00	21,190,000,000.00
1967			651,269,905.17	651,269,905.17	1,194,866.50	494,658,437.14		868,750,000.00	565,000,000.00	21,755,000,000.00
1968			651,269,905.17	651,269,905.17	1,194,866.50	495,853,303.64		886,000,000.00	572,500,000.00	22,327,500,000.00
1969			651,269,905.17	651,269,905.17	1,194,866.50	497,048,170.14		903,250,000.00	580,000,000.00	22,907,500,000.00
1970			651,269,905.17	651,269,905.17	1,194,866.50	498,243,036.64		920,500,000.00	587,500,000.00	23,495,000,000.00
1971			651,269,905.17	651,269,905.17	1,194,866.50	499,437,903.14		937,750,000.00	595,000,000.00	24,090,000,000.00
1972			651,269,905.17	651,269,905.17	1,194,866.50	500,632,769.64		955,000,000.00	602,500,000.00	24,692,500,000.00
1973			651,269,905.17	651,269,905.17	1,194,866.50	501,827,636.14		972,250,000.00	610,000,000.00	25,302,500,000.00
1974			651,269,905.17	651,269,905.17	1,194,866.50	503,022,502.64		989,500,000.00	617,500,000.00	25,920,000,000.00
1975			651,269,905.17	651,269,905.17	1,194,866.50	504,217,369.14		1,006,750,000.00	625,000,000.00	26,545,000,000.00
1976			651,269,905.17	651,269,905.17	1,194,866.50	505,412,235.64		1,024,000,000.00	632,500,000.00	27,177,500,000.00
1977			651,269,905.17	651,269,905.17	1,194,866.50	506,607,102.14		1,041,250,000.00	640,000,000.00	27,817,500,000.00
1978			651,269,905.17	651,269,905.17	1,194,866.50	507,801,968.64		1,058,500,000.00	647,500,000.00	28,465,000,000.00
1979			651,269,905.17	651,269,905.17	1,194,866.50	508,996,835.14		1,075,750,000.00	655,000,000.00	29,120,000,000.00
1980			651,269,905.17	651,269,905.17	1,194,866.50	510,191,701.64		1,093,000,000.00	662,500,000.00	29,782,500,000.00
1981			651,269,905.17	651,269,905.17	1,194,866.50	511,386,568.14		1,110,250,000.00	670,000,000.00	30,452,500,000.00
1982			651,269,905.17	651,269,905.17	1,194,866.50	512,581,434.64		1,127,500,000.00	677,500,000.00	31,130,000,000.00
1983			651,269,905.17	651,269,905.17	1,194,866.50	513,776,301.14		1,144,750,000.00	685,000,000.00	31,815,000,000.00
1984			651,269,905.17	651,269,905.17	1,194,866.50	514,971,167.64		1,162,000,000.00	692,500,000.00	32,507,500,000.00
1985			651,269,905.17	651,269,905.17	1,194,866.50	516,166,034.14		1,179,250,000.00	700,000,000.00	33,207,500,000.00
1986			651,269,905.17	651,269,905.17	1,194,866.50	517,360,900.64		1,196,500,000.00	707,500,000.00	33,915,000,000.00
1987			651,269,905.17	651,269,905.17	1,194,866.50	518,555,767.14		1,213,750,000.00	715,000,000.00	34,630,000,000.00
1988			651,269,905.17	651,269,905.17	1,194,866.50	519,750,633.64		1,231,000,000.00	722,500,000.00	35,352,500,000.00
1989			651,269,905.17	651,269,905.17	1,194,866.50	520,945,500.14		1,248,250,000.00	730,000,000.00	36,082,500,000.00
1990			651,269,905.17	651,269,905.17	1,194,866.50	522,140,366.64		1,265,500,000.00	737,500,000.00	36,820,000,000.00
1991			651,269,905.17	651,269,905.17	1,194,866.50	523,335,233.14		1,282,750,000.00	745,000,000.00	37,565,000,000.00
1992			651,269,905.17	651,269,905.17	1,194,866.50	524,530,099.64		1,300,000,000.00	752,500,000.00	38,317,500,000.00
1993			651,269,905.17	651,269,905.17	1,194,866.50	525,724,966.14		1,317,250,000.00	760,000,000.00	39,077,500,000.00
1994			651,269,905.17	651,269,905.17	1,194,866.50	526,919,832.64		1,334,500,000.00	767,500,000.00	39,845,000,000.00
1995			651,269,905.17	651,269,905.17	1,194,866.50	528,114,699.14		1,351,750,000.00	775,000,000.00	40,620,000,000.00
1996			651,269,905.17	651,269,905.17	1,194,866.50	529,309,565.64		1,369,000,000.00	782,500,000.00	41,402,500,000.00
1997			651,269,905.17	651,269,905.17	1,194,866.50	530,504,432.14		1,386,250,000.00	790,000,000.00	42,192,500,000.00
1998			651,269,905.17	651,269,905.17	1,194,866.50	531,699,298.64		1,403,500,000.00	797,500,000.00	42,990,000,000.00
1999			651,269,905.17	651,269,905.17	1,194,866.50	532,894,165.14		1,420,750,000.00	805,000,000.00	43,795,000,000.00
2000			651,269,905.17	651,269,905.17	1,194,866.50	534,089,031.64		1,438,000,000.00	812,500,000.00	44,607,500,000.00
2001			651,269,905.17	651,269,905.17	1,194,866.50	535,283,898.14		1,455,250,000.00	820,000,000.00	45,427,500,000.00
2002			651,269,905.17	651,269,905.17	1,194,866.50	536,478,764.64		1,472,500,000.00	827,500,000.00	46,255,000,000.00
2003			651,269,905.17	651,269,905.17	1,194,866.50	537,673,631.14		1,489,750,000.00	835,000,000.00	47,090,000,000.00
2004			651,269,905.17	651,269,905.17	1,194,866.50	538,868,497.64		1,507,000,000.00	842,500,000.00	47,932,500,000.00
2005			651,269,905.17	651,269,905.17	1,194,866.50	540,063,364.14		1,524,250,000.00	850,000,000.00	48,782,500,000.00
2006			651,269,905.17	651,269,905.17	1,194,866.50	541,258,230.64		1,541,500,000.00	857,500,000.00	49,640,000,000.00
2007			651,269,905.17	651,269,905.17	1,194,866.50	542,453,097.14		1,558,750,000.00	865,000,000.00	50,505,000,000.00
2008			651,269,905.17	651,269,905.17	1,194,866.50	543,647,963.64		1,576,000,000.00	872,500,000.00	51,377,500,000.00
2009			651,269,905.17	651,269,905.17	1,194,866.50	544,842,830.14		1,593,250,000.00	880,000,000.00	52,257,500,000.00
2010			651,269,905.17	651,269,905.17	1,194,866.50	546,037,696.64		1,610,500,000.00	887,500,000.00	53,145,000,000.00
2011			651,269,905.17	651,269,905.17	1,194,866.50	547,232,563.14		1,627,750,000.00	895,000,000.00	54,040,000,000.00
2012			651,269,905.17	651,269,905.17	1,194,866.50	548,427,429.64		1,645,000,000.00	902,500,000.00	54,942,500,000.00
2013			651,269,905.17	651,269,905.17	1,194,866.50	549,622,296.14		1,662,250,000.00	910,000,000.00	55,852,500,000.00
2014			651,269,905.17	651,269,905.17	1,194,866.50	550,817,162.64		1,679,500,000.00	917,500,000.00	56,770,000,000.00
2015			651,269,905.17	651,269,905.17	1,194,866.50	552,012,029.14		1,696,750,000.00	925,000,000.00	57,695,000,000.00
2016			651,269,905.17	651,269,905.17	1,194,866.50	553,206,895.64		1,714,000,000.00	932,500,000.00	58,627,500,000.00
2017			651,269,905.17	651,269,905.17	1,194,866.50	554,401,762.14		1,731,250,000.00	940,000,000.00	59,567,500,000.00
2018			651,269,905.17	651,269,905.17	1,194,866.50	555,596,628.64		1,748,500,000.00	947,500,000.00	60,515,000,000.00
2019			651,269,905.17	651,269,905.17	1,194,866.50	556,791,495.14		1,765,750,000.00	955,000,000.00	61,470,000,000.00
2020			651,269,905.17	651,269,905.17	1,194,866.50	557,986,361.64		1,783,000,000.00	962,500,000.00	62,432,500,000.00
2021			651,269,905.17	651,269,905.17	1,194,866.50	559,181,228.14		1,800,250,000.00	970,000,000.00	63,402,500,000.00
2022			651,269,905.17	651,269,905.17	1,194,866.50	560,376,094.64		1,817,500,000.00	977,500,000.00	64,380,000,000.00
2023			651,269,905.17	651,269,905.17	1,194,866.50	561,570,961.14		1,834,750,000.00	985,000,000.00	65,365,000,000.00
2024			651,269,905.17	651,269,905.17	1,194,866.50	562,765,827.64		1,852,000,000.00	992,500,000.00	66,357,500,000.00
2025			651,269,905.17	651,269,905.17	1,194,866.50	563,960,694.14		1,869,250,000.00	1,000,000,000.00	67,357,500,000.00
2026			651,269,905.17	651,269,905.17	1,194,866.50	565,155,560.64		1,886,500,000.00	1,007,500,000.00	68,365,000,000.00
2027			651,269,905.17	651,269,905.17	1,194,866.50	566,350,427.14		1,903,750,000.00	1,015,000,000.00	69,380,000,000.00
2028			651,269,905.17	651,269,905.17	1,194,866.50	567,545,293.64		1,921,000,000.00	1,022,500,000.00	70,402,500,000.00
2029			651,269,905.17	651,269,905.17	1,194,866.50	568,740,160.14		1,938,250,000.00	1,030,000,000.00	71,432,500,000.00
2030			651,269,905.17	651,269,905.17	1,194,866.50	569,935,026.64		1,955,500,000.00	1,037,500,000.00	72,470,000,000.00
2031			651,269,905.17	651,269,905.17	1,194,866.50	571,129,893.14		1,972,750,000.00	1,045,000,000.00	73,515,000,000.00
1970	7,965,776.65	398,288.83	651,668,193.99	659,633,970.64	1,194,866.50	572,324,759.64		1,990,000,000.00	1,052,500,000.00	74,567,500,000.00
1971			651,668,193.99	651,668,193.99	1,194,866.50	573,519,626.14		2,007,250,000.00	1,060,000,000.00	75,627,500,000.00
1972			651,668,193.99	651,668,193.99	1,194,866.50	574,714,492.64		2,024,500,000.00	1,067,500,000.00	76,695,000,000.00
1973			651,668,193.99	651,668,193.99	1,194,866.50	575,909,359.14		2,041,750,000.00	1,075,000,000.00	77,770,000,000.00
1974			651,668,193.99	651,668,193.99	1,194,866.50	577,104,225.64		2,059,000,000.00	1,082,500,000.00	78,852,500,000.00
1975			651,668,193.99	651,668,193.99	1,194,866.50	578,299,092.14		2,076,250,000.00	1,090,000,000.00	79,942,500,000.00
1976			651,668,193.99	651,668,193.99	1,194,866.50	579,493,958.64		2,093,500,000.00	1,097,500,000.00	81,040,000,000.00
1977			651,668,193.99	651,668,193.99	1,194,866.50	580,688,825.14		2,110,750,000.00	1,105,000,000.00	82,145,000,000.00
1978			651,668,193.99	651,668,193.99	1,194,866.50	581,883,691.64		2,128,000,000.00	1,112,500,000.00	83,257,500,000.00
1979			651,668,193.99	651,668,193.99	1,194,866.50	583,078,558.14		2,145,250,000.00	1,120,000,000.00	84,377,500,000.00
1980			651,668,193.99	651,668,193.99	1,194,866.50	584,273,424.64		2,162,500,000.00	1,127,500,000.00	85,505,000,000.00
1981			651,668,193.99	651,668,193.99	1,194,866.50	585,468,291.14		2,179,750,000.00	1,135,000,000.00	86,640,000,000.00
1982			651,668,193.99	651,668,193.99	1,194,866.50	586,663,157.64		2,197,000,000.00	1,142,500,000.00	87,782,500,000.00
1983			651,668,193.99	651,668,193.99	1,194,866.50	587,858,024.14		2,214,250,000.00	1,150,000,000.00	88,932,500,000.00
1984			651,668,193.99	651,668,193.99	1,194,866.50	589,052,890.64		2,231,500,000.00	1,157,500,000.00	90,090,000,000.00
1985			651,668,193.99	651,668,193.99	1,194,866.50	590,247,757.14		2,248,750,000.00	1,165,000,000.00	91,255,000,000.00
1986			651,668,193.99	651,668,193.99	1,194,866.50	591,442,623.64		2,266,000,000.00	1,172,500,000.00	92,427,500,000.00
1987			651,668,193.99	651,668,193.99	1,194,866.50	592,637,490.14		2,283,250,000.00	1,180,000,000.00	93,607,500,000.00
1988			651,668,193.99	651,668,193.99	1,194,866.50	593,832,356.64		2,300,500,000.00	1,187,500,000.00	94,795,000,000.00
1989			651,668,193.99	651,668,193.99	1,194,866.50	595,027,223.14		2,317,750,000.00	1,195,000,000.00	95,990,000,000.00
1990			651,668,193.99	651,668,193.99	1,194,866.50	596,222,089.64		2,335,000,000.00	1,202,500,000.00	97,192,500,000.00
1991			651,668,193.99	651,668,193.99	1,194,866.50	597,416,956.14		2,352,250,000.00	1,210,000,000.00	98,402,500,000.00
1992			651,668,193.99	651,668,193.99	1,194,866.50	598,611,822.64		2,369,500,000.00	1,217,500,000.00	99,620,000,000.00
1993			651,668,193.99	651,668,193.99	1,194,866.50	599,806,689.14		2,386,750,000.00	1,225,000,000.00	100,845,000,000.00
1994			651,668,193.99	651,668,193.99	1,194,866.50	601,001,555.64		2,404,000,000.00	1,232,500,000.00	102,077,500,000.00
1995			651,668,193.99	651,668,193.99	1,194,866.50	602,196,422.14		2,421,250,000.00	1,240,000,000.00	103,317,500,000.00
1996			651,668,193.99	651,668,193.99	1,194,866.50	603,391,288.64		2,438,500,000.00	1,247,500,000.00	104,565,000,000.00
1997			651,668,193.99	651,668,193.99	1,194,866.50	604,586,155.14		2,455,750,000.00	1,255,000,000.00	105,820,000,000.00
1998			651,668,193.99	651,668,193.99	1,194,866.50	605,781,021.64		2,473,000,000.00	1,262,500,000.00	107,082,500,000.00
1999			651,668,193.99	651,668,193.99	1,194,866.50	606,975,888.14		2,490,250,000.00	1,270,000,000.00	108,352,500,000.00
2000			651,668,193.99	651,668,193.99	1,194,866.50	608,170,754.64		2,507,500,000.00	1,277,500,000.00	109,630,000,000.00
2001			651,668,193.99	651,668,193.99	1,194,866.50	609,365,621.14		2,524,750,000.00	1,285,000,000.00	110,915,000,000.00
2002			651,668,193.99	651,668,193.99	1,194,866.50	610,560,487.64		2,542,000,000.00	1,292,500,000.00	112,207,500,000.00
2003			651,668,193.99	651,668,193.99	1,194,866.50	611,755,354.14		2,559,250,000.00	1,300,000,000.00	113,507,500,000.00
2004			651,668,193.99	651,668,193.99	1,194,866.50	612,950,220.64		2,576,500,000.00	1,307,500,000.00	114,815,000,000.00
2005			651,668,193.99	651,668,193.99	1,194,866.50	614,145,087.14		2,593,750,000.00	1,315,000,000.00	116,130,000,000.00
2006			651,668,193.99	651,668,193.99	1,194,866.50	615,339,953.64		2,611,000,000.00	1,322,500,000.00	117,452,500,000.00
2007			651,668,193.99	651,668,193.99	1,194,866.50	616,534,820.14		2,628,250,000.00	1,330,000,000.00	118,782,500,000.00
2008			651,668,193.99	651,668,193.99	1,194,866.50	617,729,686.64		2,645,500,000.00	1,337,500,000.00	120,120,

net, when at one time they could not get 30 cents per acre; when I find no one complaining for the lack of crops or on account of failure of crops; when I find an abundance of water supply for everyone who desires it and find it in productive use; when I find but little, if anything, lacking that should be upon farms of like communities, I feel safe in concluding that the Yuma project is 'a going concern.'"

The Yuma project is but 1 of about 26 "going concerns" of a like character, constructed by the United States Reclamation Service of the Department of the Interior under the Newlands Act of 1902. They lie in 15 different States, stretching from the Canadian line to Mexico. Our Milk River project in Montana uses water that flows through Canada, while our Rio Grande project in New Mexico and Texas delivers water, under an international treaty, for the irrigation of lands in old Mexico. In this beneficent work of reclamation our engineers have tunneled mountains, changed rivers, and constructed some of the greatest dams in the world. Nearly a half million people have secured homes on these lands (to say nothing of added population in towns and cities resultant therefrom), which have produced crops since 1905 having a total value in excess of $250,000,000. Government irrigation has added to the land values of the country more than a half billion dollars, and to provide for these homes $125,000,000 has in 18 years been expended; 1,750,000 acres previously unproductive have been converted into productive farms, giving birth to numerous new towns and cities and in numerous instances adding in tenfold to the old. In addition to this there is included in the result of the expenditure almost an equal acreage outside of the Federal projects, the same being supplied with water by the Reclamation Service under what is known as the Warren Act. Measured from this experience it is not unreasonable to assume that should this bill become a law, that as a result of the planting of the sum provided for, with the crop of financial resources to grow therefrom, within the next 25 years, as disclosed by the foregoing tables, homes will be provided for from six to ten millions of people, especially so when the resultant upbuilding of towns and cities are considered, and it requires but little imagination to foresee the added wealth, prosperity, and corresponding contentment to be added to the Nation's general good and welfare.

One of the very strong features of the measure consists in taking the irrigation district system as a basis or foundation upon which to erect the reclamation structure.

During the last five years, through the assistance and cooperation of the legal division of the Reclamation Service, practically all of the 17 arid land States have enacted and amended irrigation district laws to conform to the requirements of the Federal reclamation act, thereby facilitating State and National cooperation in the construction of reclamation projects.

For the convenience of those who have not had occasion to look into the organization and workings of the irrigation-district system, permit me to outline the general features of the irrigation district laws.

Irrigation districts are public corporations, commonly known as municipal corporations; or, to be more technical, they are sometimes termed "quasi-municipal" corporations and are similar in effect to road districts, drsinage districts, school districts, towns, and cities. The towns and cities are more complete and more far reaching in general as well as in the detailed powers delegated than are irrigation districts, but to the extent of jurisdiction granted districts under their organization are equally as efficient and practicable. The question as to the extent of their similarity and powers exercised is one of degree only. Both are equal before the law. For a further and perhaps a more clear elucidation of the subject, let us take note of the principal steps required and taken in the organization of an irrigation district to and including the time when bond issues and bond sales are permitted and exercised.

Take Oregon as an example—and practically all the arid States have irrigation district laws of like import and effect. To bring into legal existence an irrigation district there is first presented a petition to the board of county commissioners or to the county judge in the county of the State in which a majority of the lands may be situated, signed by a fixed percentage of the landowners prescribed by the irrigation district laws of such State. The petition describes the lands and requests that an irrigation district be formed including therein the described lands within the proposed district boundaries. The petition is accompanied by a map of the proposed district, disclosing the location of the proposed canal and other works by which the land in the district is to be irrigated, accompanied by a bond to the county in double the probable cost of the organization, conditioned that the bondsmen shall pay all costs in case the district is not organized.

There is also filed with the petition a report of a competent irrigation engineer setting forth the proposed plans for the irrigation of the lands, making a statement as to the available water supply, etc., which is filed with the clerk of the board of county commissioners or the county judge, as the case may be. This is followed by publishing

a notice for three or more weeks, stating that the petition has been filed and that the same will be heard by the board on a date there fixed. At the hearing those objecting to the organization may make their objections known. If lands are sought to be excluded or included, as the case may be, the matter receives a full hearing, and any person whose lands are adjacent to the district may have his lands included within its boundaries, and lands not benefited by reason of the organization of the district may be excluded.

After these matters are determined the court or board makes an order describing the lands, stating that the same will be organized into a district, naming the district, provided the vote of the electors on the proposition shall be favorable to its organization. This is followed by giving notice of such election by publication for a specified time prior to the election in newspapers published in the county or counties wherein the lands may lie. The notice gives the name of the district and describes the lands to be included. As a rule two-thirds vote is required in favor of the district to authorize the creation thereof. At the election directors are elected, who serve until their successors are elected and qualify. The board of commissioners or judge, as the case may be, canvass the returns of the election and the result is announced as in ordinary municipal elections.

The directors are expected, at the time of the organization of the district or soon thereafter, to formulate a plan for its proposed operation, consisting of surveys, examination, maps, plans, estimates, etc., all of which are submitted to the State engineer for his examination, who, within a prescribed period, reports upon the same to the board of directors. Upon receiving this report the board determines the amount required and calls a special election, notice of which is given in the manner usually required for special municipal elections.

As soon as the organization is well under way and before a bond issue has been authorized (which is usually by vote of the electors) the board examines each tract of the land and legal subdivision thereof to determine the benefits which may accrue thereto, and thereafter apportions the assessments or benefits, giving notice to the landowners to meet on a certain date to hear objections thereto. This notice is usually published as is done in case of elections and other hearings. The assessment thus provided is subject to review by the district courts in which the major portion of the lands within the boundaries of the District may lie.

Provision is made by statute for confirmation proceedings to be instituted in the circuit or district court to test the validity of the organization of the district and issuance of bonds before placing them on the market, and, as required in this, bill before acceptance by the Federal Farm Loan Board. At the hearings all of the proceedings pertaining to the organization, together with the authorization of the bonds, are considered by the court, and if found regular a decree is entered accordingly.

Provision is made for appeal to the Supreme Court and in some States a decree of the Supreme Court confirming the proceedings is secured before the bonds are placed upon the market. In some instances it is provided that an appeal to the highest court must be taken within a certain period, and if not taken the decree of the circuit or district court becomes final and conclusive as to all except jurisdictional questions.

It will thus be observed that the same safeguards are placed around the bond issues and the bonds of an irrigation district as may be found in connection with school districts, towns, and cities, placing the safety in the purchase of bonds under such circumstances and their validity on a parity with other municipalities. In the earlier stages of growth of the irrigation district law this safety did not exist. The laws of the various States had to pass through various stages of experimentation and growth, meeting in many cases with much disappointment, but during the last 20 years this type of municipalities have reached substantially the same stage of perfection as have towns and cities, all of which passed through their experimental stages before reaching their present stage of perfection.

The experience of the Reclamation Service in its first decade demonstrated to the satisfaction the service the plan first invoked of dealing by contract with the individuals and personal assessments, with but few exceptions, to be impractical, especially when it came to enforcing the rights of the United States in the collection of the construction and maintenance charges provided for in such instances. It was then necessary to deal with the individual and the individuals being numerous the efficiency of the system was impeded accordingly. Under the irrigation district laws now in general use throughout the 17 arid land States, dealing with the water users is comparitively easy. The district enters into a contract with the United States; such individual contracts as are made are with the district and are similar in import to individual contracts made with a city for household water supply. Like a city the dis-

trict does the collecting; the municipality is the instrumentality through which the water users and the Government function.

It is important to note that one of the very commendable features of this bill is that when the bonds are sold and proceeds covered into the reclamation fund the financial obligations incurred by the Government so far as construction costs are concerned end. The United States does not guarantee the payment of the bonds or interest; but the Federal Farm Loan Board will handle the sale and collection as in case of other bonds. And the fact that the Secretary must first approve the plan and the Reclamation Service constructs the works, is in charge of the project (through the district) and safely carries it through the first 5-year period, and that the Federal Farm Loan Board appraises and finds the lands to be double in value to the par value of the bonds, should and undoubtedly will enable the board to sell the bonds at par, and under favorable financial conditions even above par.

Inquiries have been made concerning the procedure and ultimate result in case of default in payment of the bonds or interest. Some appear to fear the bonds might be foreclosed and the water supply, including reservoir, canals, etc., sold and purchased by others. Not so, as such would be impossible under the irrigation district system. To the average person there is nothing strange about the fact that bonds issued by a city, voted for the purpose of building its waterworks, or bonds of a school district floated for the purpose of building its schoolhouses are never foreclosed; in fact, can not be foreclosed, nor is there any provision made for such foreclosure. At first blush they seem to think that such process is necessary with respect to bonds issued by irrigation districts for construction of its waterworks for irrigation purposes, power, domestic use, etc. In this the fact is overlooked that the process of collecting the principal and interest on bonds is the same in each instance. The bonds of municipalities, whether district or cities, are never foreclosed. The tax is upon the property within the boundaries of the municipality; upon the property of the individual. In towns and cities it is upon all property, real and personal; in districts, except in two or three States, it is limited to the land benefited. If the tax is not paid the property is sold to pay the taxes and another individual purchases the property. His money pays the taxes and he becomes the owner of the land, and the property thus acquired in turn becomes subject to the payment of the tax with which to pay principal and interest of the bonds, together with the cost, operation, and maintenance of the project. Should the tax sale purchaser not pay the same the property is again sold for taxes and purchased by another, who is likewise liable in the same way, and so on, ad infinitum. When it is kept in mind that the process in effect is the same, without reference to whether it is a school district, a town, or other municipality, the response to this inquiry becomes clear.

It might be well to call attention here to another phase of the extent to which operations may be carried on through the irrigation district system. Many States have what is known as drainage district laws, similar in import to irrigation laws, but limited to the drainage lands within the district. The irrigation district laws are broader in their scope to the extent that all necessary drainage incidental to the reclamation of arid lands within a district may be reclaimed under the irrigation district system without the necessity of organizing drainage districts. Briefly stated, you can not reclaim arid lands under a drainage district, but you can reclaim "water-logged" or swampy lands under the irrigation district system whenever to do so is reasonably essential to the success of a project.

The many years of experience of the Reclamation Service in reclaiming arid lands has demonstrated that on about 90 per cent of the projects a drainage system has become necessary. The location of drainage canals can not well be determined until after a project is well under way or until after a few years have elapsed, by which time the constant use and application of water upon the lands discloses the necessary location and the extent to which the reclamation of swamp and water-logged lands may become necessary.

The legal authority to provide a drainage system has on irrigation projects under irrigation district laws been settled by the courts in favor of the right to do so; in fact, it has been held as necessary and incidental to the success of most projects and clearly within the purpose for which reclamation funds have been provided. (See discussion in Hand Book on Irrigation District Laws, by King and Burr, pp. 26–33. Among authorities there cited are: Nampa Meridian Irr. Dist. *v.* Ptrie, 153 Fac., 425, 429; Pioneer Irri. Dist. *v.* Stone, 130, Pac., 383.)

Senator Kendrick has called attention to a situation in Wyoming to the effect that there are large areas of public lands where there are no settlers or the settlers are inadequate in number for the organization of irrigation districts. As a rule and the exceptions are very few, it will be found that on all available projects the majority of lands are privately owned and are not public lands, but to remedy the situation

adverted to by Senator Kendrick it is proposed to amend the bill by providing, in substance, that where the public lands within a proposed district exceed 50 per cent of the area therein the Secretary may appoint such number of persons to represent the interests of the United States as will constitute a majority of the governing board, who may participate in all proceedings of the district, including its organization, vote at all elections, and serve on the governing board of the district. Under this plan the district in such cases, like districts in States where all or a large part of the lands may be privately owned may issue the bonds required by this act, to be deposited with the Federal Farm Loan Board and await their turn-over period, by which time the lands will all be under settlement and cultivation, and in all probability be worth double the value of the bonds, enabling them to be sold as provided for in case of sale of bonds in other districts. This may require some changes in the laws of some States where it is sought to avail themselves of the provisions of this act, but my observation during my seven years of experience in the Reclamation Service, has been that the States have but little difficulty and lose but little time in adjusting their laws to meet the new conditions essential to the construction of a project under a General reclamation law or amendments thereto, and this would doubtless occur in this instance.

The Reclamation Service has long since definitely come to the conclusion that the Water Users Association method, consisting of an individual contract control system of securing the return of the cost of Federal irrigation works, is not the most practical method and that the most effective instrumentality for this purpose is the irrigation district system.

Briefly stated, the following are some of the reasons why the United States Reclamation Service favors the irrigation district as an instrumentality for securing the return of the cost of irrigation works:

1. The irrigation district is more easily and quickly formed than any other similar organization, thus securing speed in the building of a project.
2. All lands benefited are bound to pay their proper share of the costs of an irrigation system, and a small minority of landowners can not impede development.
3. All lands benefited become obligated at once, insuring a greater productiveness in crops and an earlier return of the cost.
4. It is thoroughly democratic, being under genuine popular control.
5. It enlarges the sense of local civic responsibility.
6. It obviates the need of examining abstracts of title in connection with the water-right applications for lands in private ownership.
7. It requires the land to be put into cultivation to meet assessments, and so retards speculation.
8. It simplifies the machinery for the collection of moneys due the United States.
9. It permits the water users to secure loans under the Federal farm loan act, and so gives them better opportunity to develop their farms.
10. It is being almost universally adopted and water users understand what it means.
11. It has been sustained by the United States Supreme Court, and is favored in acts of Congress.
12. It is the most efficient organization of which we know, and affords the best security to guarantee the return of the cost of an irrigation project to the United States and all in all, it best meets the demands of the national irrigation law, that the estimated cost of Federal irrigation works shall be returned.

The irrigation district idea was originally brought out in California. The parent law is known as the Wright Act. The Wright Act has been changed a great deal since it first appeared in 1887 until now it is a well-perfected body of law. All of the 17 arid States have a very complete system of irrigation district laws.

The constitutionality of the law was upheld by the United States Supreme Court, November, 1896 (Fallbrook Irrigation District *v.* Bradley, 164 U. S. Rep., 112; 41 L. Ed. 369), and by all decisions in courts of last resort bearing on the subject since that date. For an extensive discussion of the irrigation district system, including drainage incidental thereto, and laws on the subject, see Handbook of Irrigation District Laws of the Seventeen Western States of the United States, by Will R. King and E. W. Burr, the manuscript for which was presented to and published by the Arid Lands Committee in the House of Representatives, December 19, 1919 (reconsideration H. R. 2707, part 3).

See also hearings before same committee on H. R. 262, February 26, 1916, and H. R. 2702, September 19–20 and December 19, 1919.

It will be observed that when the appraised value of the lands becomes double the par value of the bonds, the bonds shall be offered for sale by the Federal Farm Loan Board. Common experience has demonstrated that when a project is once begun there is no difficulty in settling of the lands as rapidly, if not more rapidly, than

desired. It is but proper, I think, that the sale of these bonds should be made by the Federal Farm Loan Board; in the first place they are farm bonds, similar in their nature and effect to bonds usually handled by the Federal Farm Loan Board. Again, the Federal Farm Loan Board has the machinery with which to ascertain the value of the lands covered by the bonds and to determine when the bonds should become salable and when they should be sold.

The confidence which the public in general has learned to acquire in the Federal Farm Loan Board in the handling of the affairs heretofore placed within its jurisdiction will give to the sale of the bonds an impetus that could come from no other source. The validity of the Federal farm loan act has been upheld by the highest court in the land, and it requires no argument to demonstrate that the bonds herein provided for have the same status under the law. The constitutionality of the sale can not well be questioned; the bonds as a rule will sell as well as bonds now handled by the Federal Farm Loan Board. Each has behind it for security the most secure of all lands. In the first place, the fact that the Government of the United States, with its well qualified corps of engineers, has decided a project to be feasible lends its services to the construction of the project, and the further fact that the crops on a reclamation project never fail for the want of water, affords a guaranty for the repayment of the bonds not found in many quarters of the United States where loans are necessarily made by the Federal Farm Loan Board upon lands depending upon the rainfall for the permanency of their crops. I think, therefore, the feature in the bill requiring the Federal Farm Loan Board to handle the bonds, determine the date of sale, etc., a strong feature in the bill.

Section 10 of the proposed bill makes provision for the sale of all unentered lands of the United States in a district, the price to be fixed by the Secretary, in farm units and the sale to be made to citizens not owners or proprietors of an area of farm land, which, together with the area acquired under the provisions of this section, would exceed 160 acres, or a less area if the Secretary should so decide. Provision is also made for payments, the first payment to be 10 per cent of the purchase price, and balance to be paid in annual installments in not more than 10 years, with interest on deferred payments at the rate of 5 per cent per annum. This provision, although a departure from the former land system, I regard as very commendable. Experience has demonstrated that unless a settler is able to pay a small percentage at the time of occupying the premises as a rule great difficulty is encountered in the collection of the first few years' installments charged against the land for construction, operation, and maintenance.

The experiment of selling the land outright was tried on the Yuma Mesa project with very good success. Provision was made by special act permitting the sale of the Yuma Mesa lands, the funds to be used for construction purposes. The land was sold without difficulty and at a good price, contributing largely to the construction of a project which otherwise might have remained unconstructed for many years. The successful experience in that instance clearly demonstrated the advisability of following some similar plan with reference to further projects where large tracts were public lands. Again, the fact that the lands are sold and settlement required thereon will, as a rule, place upon them a more successful class of farmers and a class which will more strongly tend to insure repayment of the funds invested for construction work.

We come next to the question, sometimes raised, as to whether the public funds of the United States may be made available for the reclamation of lands within an irrigation district in which the larger part, if not all, may be held in private ownership. It would seem, however, that the constitutionality of this class legislation has practically outgrown all interrogatories upon the subject. It can not be disputed that congressional interpretation of our Constitution on this point for more than two decades should be entitled to great weight, if not conclusive.

In this connection attention is called to the projects where at time of construction the lands were substantially all in private ownership, the constitutionality of which Congress has repeatedly recognized by making annual appropriations for their completion, operation, and maintenance.

For nearly two decades the reclamation act has been interpreted without reference to whether the land to be irrigated was public or private. The chief matters of concern have been and are: First, do the lands require and will they be benefited by irrigation? Second, is the project otherwise feasible? At no time has the Reclamation Service or Congress in making appropriations to carry out the purposes of the reclamation act made any distinction between public and private lands to be irrigated. The eleventh Annual Report of the Reclamation Service, 1911 and 1912, also subsequent reports, in discussing the various projects undertaken, gives the status

of the lands in each project, and discloses that of the works undertaken and constructed at the time of setting aside of Government funds for that purpose, all of which has been and still is ratified and continues to be authorized by Congress, about one-half of the lands in the aggregate were in private ownership. The balance were public lands belonging to the United States, State lands, Indian lands, and lands belonging to the railway companies.

In the Orland project in California but an exceedingly small part of the irrigable area was public lands, while the remainder was held in private ownership.

On the Uncompahgre Valley project, Colorado, 34,000 acres were public lands, while 106,000 were in private ownership.

The Garden City, Kan., project, was all in private ownership.

The Carlsbad project, New Mexico, also included only privately owned lands.

On the Hondo project 240 acres were public lands, while 9,760 acres were under private ownership.

On the Strawberry Valley project, Utah, there was but a moderate acreage of public lands, while the greater part of the 60,000 irrigable acreage were privately owned.

On the Okanogan project, Washington, 1,234 acres were public lands and 8,666 acres under private ownership.

Yakima project, Washington, consisted of 10,114 acres of public lands, 11,654 acres of State lands, and 12,000 acres of Indian lands, while the balance of 177,658 acres were under private ownership.

In 1890 (26 Stat. L., 391) Congress recognized the arid section as being all west of the one hundredth meridian by expressly declaring:

"That in all patents for lands hereafter taken up under any of the land laws of the United States or on entries or claims validated by this act west of the one hundredth meridian, it shall be expressed that there is reserved from the lands in said patent described, a right of way thereon for ditches or canals constructed by the authority of the United States."

This recognition of the arid section is also supplemented by the reclamation act itself.

As stated by Judge Morrow in Burley *v.* United States (179 Fed., 1; also see Greene *v.* Wilhite, 14 Idaho, 238), the public welfare requires that the lands in private ownership should be reclaimed and made productive as well as lands in public ownership, and that "to do this effectively and economically within the available water supply large tracts must be brought into relation with a single system or project."

In this connection it will be observed that every State within the arid belt has made some provision with reference to the reclamation of arid lands, thus in conjunction with the Government, recognizing them as such. We have then not only this recognition by Congress but the mutual, or, to say the least, implied agreement to that effect by each of the States through legislative and constitutional enactments.

Furthermore, the Government supplements this recognition by a treaty entered into with the Government of Mexico on the subject. Congress (Feb. 25, 1905, 33 Stat., 814) has also recognized the right to reclaim private lands by making the reclamation act extend to the State of Texas, in which the United States has never owned any public lands, giving us thereby a further interpretation of the law bearing upon the subject, from a national standpoint.

By act of March 4, 1907 (34 Stat., 1357), an appropriation of $1,000,000 was made available as needed, to be expended under the direction of the Secretary of the Interior for the construction of a dam mentioned in connection with an irrigation project on the Rio Grande, and on June 12, 1906 (34 Stat., 259), the reclamation act was extended to include and apply to the entire State of Texas where there never has been any public land of the United States.

In the case of Burley *v.* United States et al., circuit court of appeals, ninth circuit, July 5, 1910 (179 Fed., 1), it was held that the United States had the right to condemn private lands for a reservoir site for the Payette-Boise project, although a portion of the lands to be irrigated therefrom were under private ownership. The court said: "The act clearly provides for the irrigation of private lands under the conditions therein specified, where such lands are arid and within the limits of an irrigation project deemed by the Secretary of the Interior to be practicable and advisable."

The Supreme Court of the United States in the case of Fallbrook Irrigation District *v.* Bradley (164 U. S., 112, 161; 17 Sup. Ct., 56, 64; 41 2d ed., 369) held in substance that the building of irrigation works an the irrigation of arid and semiarid lands, thus reclaiming and making productive barren lands and increasing the material wealth and prosperity of the people, is a matter of public interest, serves a public purpose not confined to the landowners or even to any one section of the State.

In the same case it was held that "the irrigation of really arid lands is a public purpose, and the water thus used is out to a public use; and the statutes providing for such irrigation are valid exercises of legislative power."

Circuit Judge Morrow, in the case of Burley *v.* United States, above herein cited, says:

"The policy of reclaiming the arid region of the West for a beneficial use open to all the people of the United States is as much a national policy as the preservation of rivers and and harbors for the benefit of navigation."

In sustaining his statement of the broad scope of the provisions of the reclamation act, Judge Morrow quoted from President Roosevelt's message to Congress in 1901, recommending and urging the legislation which resulted in the passage of the act, wherein the President says:

"The reclamation and settlement of the arid lands will enrich every portion of our country, just as the settlement of the Ohio and Mississippi Valleys brought prosperity to the Atlantic States. The increased demand for manufactured articles will stimulate industrial production, while wider home markets and the trade of Asia will consume the larger food supplies and effectively prevent western competition with eastern agriculture. Indeed, the products of irrigation will be consumed chiefly in the upbuilding local centers of mining and other industries, which would not otherwise come into existence at all. Our people as a whole will profit, for successful home-making is but another name for the upbuilding of the Nation."

In the case of Baker *v.* Swigart (229 U. S., 187; 57 L. ed., 1143); also Burley *v.* U. S. (179 Fed., 1), the United States Supreme Court impliedly sustained the constitutionality of the reclamation act, under which act, as heretofore indicated, the policy has been to reclaim lands without reference to whether private or public. In fact, the very project under consideration in that case contained a large acreage of private lands. While the constitutional question was not directly raised a careful reading of the facts presented, the questions involved, and conclusion reached upon the merits clearly imply that the court deemed the act within the purview of the Federal Constitution.

In the discussion of this subject before this committee, March 30, 1916, in re S. 1922, reported in full in the hearings on the bill in the Sixty-fourth session of Congress, my attention was repeatedly called to the fact that there is no express authority given in the Constitution for the reclamation of either private or public lands, and attention is frequently called to this point.

Responding, attention is directed to the fact that the Constitution of the United States contains both express and implied powers.

The same objection was raised early in the history of the country respecting the national bank act, but the objection was clearly and finally disposed of in McCulloch *v.* State of Maryland, reported in Fourth Wheaton, page 415. At that time, as I remember it from reading the history of the subject, it was a much greater jar to public sentiment, especially in so far as the lawyers were concerned as to whether the banking acts were constitutional, than the question involved in the bill now under consideration, or of the question of the reclamation act or of this act as applied to privately owned lands. Even one of the Presidents, as I recall it, took the position that the banking act was unconstitutional and much disturbance was created over it.

In the opinion of Mr. Justice Marshall, who is recognized as among the greatest of constitutional authorities, there will be found this remark:

"Let the end be legitimate, let it be within the scope of the Constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibited"—

Note those words:

"which are not prohibited, but consistent with the letter and spirit of the Constitution, are constitutional."

Judge Marshall further observes:

"Among the enumerated powers we do not find that of establishing a bank or creating a corporation. But there is no phrase in the instrument which, like the Articles of Confederation, excludes incidental or implied powers; and which requires that everything granted shall be expressly and minutely described. Even the tenth amendment, which was framed for the purpose of quieting the excessive jealousies which had been excited, omits the word 'expressly,' and declares only that the powers 'not delegated to the United States nor prohibited to the States, are reserved to the States respectively or to the people'; thus leaving the question whether the particular which may become the subject of contest has been delegated to the one government or prohibited to the other to depend on a fair construction of the whole instrument."

And again:

"Although among the enumerated powers of government, we do not find the word 'bank' or 'incorporation,' we find the great powers to lay and collect taxes; to borrow money"—

Notice these words:

"to borrow money; to regulate commerce, * * *. The exigencies of the Nation may require that the treasure raised in the North should be transported to the South, that raised in the East conveyed to the West, or that this order should be reversed. Is that construction of the Constitution to be preferred which would render these operations difficult, hazardous, and expensive? Can we adopt that construction (unless the words imperiously require it) which would impute to the framers of that instrument, when granting these powers for the public good, the intention of impeding their exercise by withholding a choice of means? If, indeed, such be the mandate of the Constitution, we have only to obey; but that instrument does not profess to enumerate the means by which the powers it confers may be executed nor does it prohibit the creation of a corporation, if the existence of such a being be essential to the beneficial exercise of those powers. It is, then, the subject of fair inquiry, how far such means may be employed.

It would thus seem clear that we should take into consideration the implied powers under the Constitution and the powers granted by the reclamation act, and the bill here proposed clearly comes within the implied powers, and, as Mr. Justice Marshall stated with reference to banking created by Federal statute, comes within the letter and spirit of the Constitution.

Furthermore, it should be noted in this connection that the United States Supreme Court as recently as February 28, 1921, has upheld the constitutionality of what is known as the Federal Farm Loan Board act. This decision is based largely upon the holding in McCullough *v.* Maryland. above cited, and Osborn *v.* Bank (9. Wheat., 738), and observes:

"Congress, it was held, had authority to use such means as were deemed appropriate to exercise the great powers of the Government by virtue of Article I, section 8, clause 18, of the Constitution granting to Congress the right to make all laws necessary and proper to make the grant effectual. In First National Bank *v.* Union Trust Co. (244 U. S., 416, 419), the Chief Justice, speaking for the court, after reviewing McCullough *v.* Maryland and Osborn *v.* Bank, and considering the power given to Congress to pass laws to make the specific powers granted effectual, said:

"'In terms it was pointed out that this broad authority was not stereotyped as of any particular time, but endured, thus furnishing a perpetual and living sanction to the legislative authority within the limits of a just discretion, enabling it to take into consideration the changing wants and demands of society and to adopt provisions appropriate to meet every situation which it was deemed required to be provided for.'"

Under the Federal farm loan act the farmers are loaned money for as long a period as provided in this bill for improvement of their farms and other purposes. It would seem beyond question that, since Congress has the constitutional authority to provide for the loaning of the public funds to the farmer to be used in private enterprises in the cultivation and improvement of privately owned lands, there could be no doubt that it also has the power to make the loan provided in this bill for the purpose of converting the vast areas of lands throughout the Nation, whether privately or publicly owned, into productive farms, thereby enhancing the wealth of the Nation to an extent far beyond the possibilities provided for in the Federal farm loan act.

Those doubting the constitutionality of the procedure provided in Senate bill 536 further overlook the fact that one of the very commendable thoughts there included is a solution, in part, of problems growing out of the World War, and that, while limited in application to arid territory, it looks to the public good of the country at large. This bill not only gives a preference right of settlement to soldiers but will afford employment and new avenues of business to the many hundreds of thousands who will engage in the new and greatly increased business affairs to be developed thereby.

The difficulties with which we are confronted in providing for the soldiers are not new. They were present following the wars of Caesar and of Napoleon and other great wars. The question always arises as to how to restore normal conditions so as to furnish the people some occupation after their return from the war that will insure their contentment. It was presented at the close of the Civil War, and was solved at that time by enactment of the homestead laws, which were at first thought to be of doubtful constitutionality. President Johnson vetoed the first bill, asserting that it discriminated against the people in the cities and towns in favor of those who desired to go to the western Territories and secure free homes, as we now sometimes hear urged by those east of the arid belt regarding funds made available and used in reclamation development of other sections of the country.

At one time the national banking act was thought unconstitutional, but no one questions the principles of that act now. The constitutionality of the pension act

was at one time assailed, but that question was long ago laid at rest. It should be remembered that pensioning of a soldier does not necessarily consist of the mere payment of a stated number of dollars monthly or quarterly to an individual; it might consist of preferences, credits, vocational training, education, insurance, employment, and opportunities to secure self-owned homes.

The Constitution is necessarily flexible; in one sense it has a soul, or what is termed the "reason and spirit" of the Constitution. It may put off old clothes and put on new ones, while the reason, spirit, or soul continue the same. We must apply new conditions as they arise in such manner as to bring them within the reason and spirit of the Constitution and the purpose for which it was framed and adopted. The Constitution, like our Nation itself, is a matter of growth. As new conditions develop—conditions that were never dreamed of in the days when the Constitution was adopted—they are met and made to come within the reason, spirit, and purpose for which the Constitution was framed, and thus prove to be constitutional. Such has long been and will continue to be the history and experience of our Federal Constitution. Unless such were the case our Federal Constitution would prove an impediment to the progress of the Republic rather than a protection to it.

I submit, therefore, that there can be no question as to the constitutional power of Congress to authorize each and all of the provisions contemplated by this act, and that, if enacted into a law, immeasurable good must necessarily result not only to the arid West or the country west of the one hundredth meridian but to the entire Nation as well.

(Thereupon, at 1 o'clock p. m., the committee adjourned to meet at the call of the chairman.)

MSH 21992

END OF
TITLE